

ENCYCLOPEDIA OF EDUCATION AND HUMAN DEVELOPMENT

VOLUME TWO

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AND HUMAN
DEVELOPMENT**

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CHILDREN'S RIGHTS

Today, children's rights is a serious social and political issue not only in the United States but also throughout the world. The 1959 United Nations Declaration of the Rights of the Child, the 1979 International Year of the Child, and the 1989 United Nations Convention on the Rights of the Child (UNCRC) mark the formal entry of the contemporary children's rights movement onto the international stage. Children's rights advocacy groups have multiplied over the years with such well-known organizations as UNICEF (1946), Save the Children (1919), and the Children's Defense Fund (1973), being joined by newer groups such as Children as Peacemakers, Childrights International Research Institute (CRIN), South Asian Coalition on Child Servitude, Black Community Crusade for Children, and World Association for the School as an Instrument of Peace. CRIN counts more than 1,300 child rights organizations in its membership network.

The concept of children's rights tends to conjure up a mixed bag of images and reactions. These images and reactions include anxiety produced by high-profile cases such as the Florida boy Gregory Kingsley's attempt in 1992 to "divorce" his natural/biological parents as well as sympathy stimulated by the sight of eight-year-old child laborers in India shackled to their weaving looms. Some regard children's rights as having something to do with protecting and providing for children, while others fear that children's rights is a corrosive challenge to the rights of parents and the privacy of the family. To navigate through the mixed bag of images and reactions, it is useful to answer several questions. What is a "child"? What is a "right"? What are "children's rights"?

In article 1 of the UNCRC (1989), a child is defined as "every human being below the age of eighteen years unless under the law applicable to the child, majority is attained earlier." The UNCRC definition

is rather broad. For many in the West, childhood is synonymous with dependency, and often with extended schooling. This, of course, is a definition conditioned by history and culture. Legal provisions can provide some guidance but here too there is much variation even within individual societies. In the United States, young people can often obtain a driver's license at age sixteen, they can vote at age eighteen, but in many states they cannot legally drink alcohol until age twenty-one though in nearly all states they can marry at age eighteen.

From a cross-cultural perspective, it is probably universally agreed that childhood begins at birth, but confusion sets in when it comes to determining the end of childhood. And does childhood end in one fell swoop, or in stages, through gradual and varied transitions? Do gender, class, race, religion, or other factors play a role in determining when childhood ends? What are the rites of passage that mark the end of childhood and the onset of adulthood? Millions of children in the world do not attend school, but work in factories, mines, homes, shops, fields, forests, and offices. The International Labour Organization (ILO) estimated 246 million child laborers in 2004, with 73 million under the age of ten. Hundreds of thousands of children, especially boys, participate either voluntarily or forcibly in armed conflicts as child soldiers. It is estimated that at any given time, there are 300,000 child soldiers under arms. The ILO suggests that 8.4 million children, boys and girls, engage in prostitution, sex tourism, and other forms of commercial sexual exploitation. Working long hours, shouldering machine guns, and trafficking in sex do not seem to be the hallmarks of childhood and yet they constitute the daily activities of so many of the world's children, including those in developed countries. Even marriage raises questions as to the end of childhood because the legal age of marriage,

along with the legal age of consent defining the time at which a person may voluntarily consent to sexual activity with another person, varies from country to country. Although the average age of marriage is generally higher, still the legal age in many countries around the world is as low as twelve. Even in the United States, fourteen-year-old boys and girls can marry in some states with parental consent. Since marriage is one of the few ways a child can be emancipated from parental control (another is military service), a married person of fifteen is no longer considered a child while an unmarried person of seventeen is not considered an adult. What then is a "child"? Given the tremendous variation in the social experiences of children in the world today, the simple definition of the UNCRC holds appeal.

What is a "right"? Throughout history, legal scholars, political thinkers, and philosophers have attempted to answer this question. Human rights and civil rights, substantive rights and procedural rights are some of the varied categories of discussion. Human rights, sometimes called natural rights, are those that belong to a person by virtue of his or her very existence as a human being. Personal freedom, or what the seventeenth-century English political theorist John Locke (1976) called "perfect freedom" is considered a fundamental human right. Human rights are considered inalienable. In the United States in 1776, the founders identified "life, liberty, and the pursuit of happiness" as inalienable rights. In 1789, revolutionaries in France declared the natural and inalienable rights of "man" as "liberty, property, security, and resistance to oppression." In 1948 the General Assembly of the United Nations adopted and proclaimed the Universal Declaration of Human Rights, stating that all members of the human family possess inalienable human rights and that these include "life, liberty, and security of person." Civil rights, often derived from natural rights, are articulated through legal codes and enforced by the state. Citizens of a state claim civil rights. Substantive rights can be seen as similar to civil rights in that they are the rights that are constitutionally guaranteed to ensure personal liberty, while procedural rights relate to the manner in which substantive rights are protected, such as through due process. In the United States, procedural rights protect citizens against arbitrary state actions. Many questions emerge about definitions of "rights" including the relationship of

power to rights, the link between moral claim and rights, the distinction between the right to do something and the right to be free from having something done to you, the balance between liberty and security rights, and the relationship between rights and duties. If rights are understood as "justifiable claims," then who has the right to make the claim and who is obliged to satisfy the claim?

When moving from a discussion of rights in general to children's rights, the complications and questions multiply. Some scholars have argued that children have always been understood to have some fundamental rights, such as the human right to life and security. At the same time, children have throughout history been considered as belonging to their parents, whose liberty rights consisted in part of making autonomous decisions regarding the care and well being of their children. This would certainly undermine the child's right to liberty. Moreover, the dependency of children—their need for care over long periods of time—has served as the rationale for not recognizing their rights beyond the most basic rights to life, and assigning the claim of those rights to adult others on behalf of vulnerable children.

The United Nations Convention on the Rights of the Child, nearly universally adopted, affirms not only the child's right to protection from harm and abuse, but also the right to childhood, to develop into an autonomous adult, and to have a voice in matters that affect and concern the individual child. Contemporary literature on children's rights identifies several categories of rights: protection rights, provision rights, and participation rights. Another distinction found in the contemporary literature is that between protection rights and liberty rights, a characteristic that underscores some of the tensions inherent in children's rights. Protection rights usually take the form of benefits that adults provide to children such as the right to nutrition, housing, and education. Since adults provide these benefits they tend to exercise power over children. Liberty rights imply the exercise of power, and yet most of the rights subsumed under the heading of children's rights do not give children power or control over their own lives. In some ways, protection rights actually limit the freedom of children, such as when children in the juvenile justice system are protected from the harsh judgment of the adult corrections system,

though in exchange young offenders lose their due process rights. Most often, adults exercise liberty rights while children claim protection rights.

A historical perspective suggests that protection rights have a long history, while provision rights (entitlements) emerge most clearly in the nineteenth century (especially the second half of the nineteenth century). Most historical accounts fold provision rights into protection rights. Participation rights or liberty rights appear as a by-product of the civil rights and human rights movements of the later twentieth century. The fact that different labels—protection, provision, and participation—attach to children's rights at different periods suggests that evolving understandings of childhood shaped different conceptions of rights for children throughout history.

In early modern times (1500–1750), the image of children as willful and tending toward sinfulness supported a climate of strict discipline and punishment that afforded only the barest forms of protection against gross abuse. As the image of childhood innocence and dependency deepened in the nineteenth century, adults made extensive efforts to protect and care for children, going so far as to use public and private organizations to intervene in the private realm of the family. By the later twentieth century, awareness of the evolving capacity of children (in contrast to a fixed state of dependency and assumed incompetence) had led to a more liberal view of their autonomy and rights-bearing potential. The heightened politicization of young people around the world in the years following 1968, and the subsequent turmoil experienced in many nations, marked a genuine turning point in the emergence of the modern children's rights movement. Today, advocates of children's rights promote the active participation of young people in the public sphere. The 2002 United Nations General Assembly Special Session on Children (UNGASS) boasted the unusual sight of children and young people participating in debates and discussions alongside government officials. In the United States, a national nonprofit organization called Youth Venture empowers young people between the ages of twelve and twenty to form organizations—civic, cultural, and business—to create change in their communities and schools. This effort recognizes that young people constitute not only a deep untapped reserve of energy and ideas but also that they have an interest in what happens to the communities in

which they live, and that implicitly they have a right to participate in change.

The common thread in the concept of children's rights across time is that children have a legitimate claim against other agents, including their families and their governments. The claims made in the name of contemporary children's rights fit into the historical liberal tradition of the West, with its emphasis on the inherent dignity of the individual, the natural equality of humans, and the possession of certain inalienable rights. However, the children's rights movement challenges historically entrenched notions of children as the property of their parents or an interest of the state, and instead posits the idea that children should be seen as persons in their own right. As this "human rights" claim expands, it is matched by a "civil rights" claim to specific quality-of-life provisions and increased procedural protections.

Kathleen Alaimo

IMAGES OF CHILDHOOD IN EUROPE AND IN THE UNITED STATES

In the European and American context, childhood has undergone several constructions and reconstructions since the dawn of the modern era, c. 1500. These include a pre-industrial model in which the worlds of children and adults were closely integrated, and all lived under the yoke of patriarchal authority; an eighteenth-century Enlightenment model which emphasized the evolving rational capacity of children as well as their distinctive individuality; the model embodied in the efforts of the American Revolution (1776–1787) and French Revolution (1789–1799) to transform the familial subjects of a king into individual citizens of a republican state; the early nineteenth-century vision of Romanticism which cast childhood as joyfully different, even better, than adulthood; and the later nineteenth-century model of the paternalist state establishing that childhood stood in need of government-sponsored protection and services.

In the pre-industrial world of the early modern era, social cohesion represented an essential goal of society. As a result, sixteenth-century children were

defined more in terms of their duties to adults, including their parents, than in terms of their own rights. Harsh discipline toward children appears to have been common, as conduct and advice books for parents attest. Figures as diverse as Martin Luther, Lady Jane Grey, Michel de Montaigne, and Heroard, the physician charged with the care of the King of France's children, recorded accounts of frequent whippings, often for little cause. Richard Whitford's *Work for Householders*, popular in both Tudor England and colonial America, urged parents to whip small children with a rod if they exhibited stubborn behavior and punish older children with diets of bread and water.

Despite the seeming prevalence of harsh corporal punishment of children, a counter-tradition existed in Europe that urged parents to recognize and fulfill their duties towards their offspring. For example, English courts in the early seventeenth century asserted the right of very young children to nourishment, placing the burden on mothers and fathers to meet this obligation. In one case, the mother of an infant and its "reputed" father were assessed a fee to pay for a wet nurse. At the Council of Trent, Catholic bishops cautioned parents about sleeping in the same bed as their children due to concerns about accidental as well as deliberate suffocation, the result of "overlaying."

Early modern children were intimately tied to the institution of the family, where from about the age of seven they began a slow initiation into the intergenerational world of work. The economic contribution and therefore the economic value of children were considerable. Even very young, idle children, who constituted an initial expense, were understood as a potential labor force for the family. As rural or cottage industry began to develop, especially in the seventeenth century, the labor of children and therefore their economic value increased. Reports exist of children as young as four and five working in the textile districts of England. Agricultural child labor and proto-industrial child labor accustomed people to the idea that children should work, and that this work would bring them into contact with adults.

High infant and child mortality prevailed throughout the early modern period in both Europe and colonial America. One in four children died before their first birthday; survival to the age of ten varied but

was fraught with danger too. Generally, the deaths of children constituted the majority of deaths in any community. In late seventeenth-century Florence, two-thirds of all deaths were of children under the age of five (Cunningham 1995). Marking an extreme case, eight of fifteen of Puritan preacher Cotton Mather's children died before the age of two, and another died shortly after turning two (Slater 1985). Infant mortality in Virginia and Maryland may have been as high as 40 percent in the seventeenth century (Smith 1985). Though Englishwoman Susanna Wesley bore nineteen children, she raised only six into childhood due to infant and child mortality (Bel Geddes 1997).

Despite the pervasiveness of childhood death and the liberal use of physical punishment, parents of the early modern era held their children in affection and public investment in the preservation of children began to develop at that time. Christians were particularly concerned that their newborns get baptized as soon as possible, often on the day of birth. Efforts to curtail infanticide and abandonment increased during this time as municipal and state foundling homes proliferated in the seventeenth and eighteenth centuries. In the French city of Rouen, the municipality funded an aid program for poor families, providing a subsidy for families with more than two children.

High adult mortality affected children too. Parental death, especially the death of a father, opened issues of child custody and inheritance of property. Throughout Europe, and later in the colonies of North America, communities developed specific provisions to protect the property rights of orphans. And for orphans without property, laws governed their placement with other families. In colonial Virginia and Maryland, special orphan courts handled the custody of children to ensure their care and took responsibility for the protection of children's property. These arrangements were increasingly formalized by court order.

Though schooling was certainly quite limited in this period, it did exist in both urban and rural communities. The Protestant and Catholic Reformations contributed to a rise in formal schooling, as the competition to win or retain religious adherents increased. Religious reformer Martin Luther became an early proponent of compulsory schooling and by 1600 some European communities had made modest elementary education compulsory. One German town

adopted a schooling requirement that emphasized the importance of education for a child's religious salvation, self-governance, and skill acquisition but also mentioned the interest that the community has in a child's education (Cunningham 1995). In Denmark, a 1630 law assigned to public guardians responsibility for children whose parents neglected to send them to school or teach them a trade (Franklin 1995). In 1642, the Puritan colony in Massachusetts adopted a similar statute. By 1705, Massachusetts towns with seventy or more residents were required to maintain a grammar school (Fass and Mason 2000). Catholic efforts to expand educational opportunities were led by religious orders such as the Jesuits, the Christian Brothers, and the Ursulines.

The early modern sense of a child's right to support, property, and even education carried many limitations. In most cases, the "right to support" was tied to mandatory placement as an apprentice or servant with another family or tied to child labor for one's own family. Apprenticeship contracts arranged by one's parents, as well as court-ordered placements (binding out), typically lasted from age fourteen to twenty-one for boys and to age eighteen for girls. Vagrant children were generally subject to local laws authorizing their collection and placement in apprenticeships. By the early seventeenth century, childhood vagrancy in places such as London had become such a severe public nuisance that officials initiated a plan to ship such children to the American colonies. Indentured youth arrangements prospered throughout the eighteenth century and were not limited to British colonies. The Portuguese, French, and Dutch had similar arrangements for excess, vagrant, idle, and homeless youth.

Parental authority and parental responsibility were both recognized in the early modern period, although the balance tipped in favor of broad parental authority. Discipline was a parental duty, and corporal punishment was almost universally accepted as appropriate. Parents, especially fathers, ruled their children much like monarchs ruled their subjects. The legal provisions in the *Body of Liberties*, promulgated in the Massachusetts Bay Colony in 1641, provided for the capital punishment of children over sixteen who assaulted their parents (Fass and Mason 2000, Hawes 1991, Mason 1994). At the same time, excessive use of force was not condoned in the disciplining of children, including apprentices. Contracts

for indentured apprentices stipulated that apprentices should not be mistreated. Court records provide evidence that excessive punishment was censored. And even the Massachusetts *Body of Liberties* set some conditions. Parents could not act arbitrarily but rather had to bring their rebellious offspring to the public court. The harshest provisions of these "stubborn child" statutes applied only to older children, specifically those "of sufficient years and understanding, viz. sixteen years of age." Thus, the statute not only suggested that severe punishment was inappropriate for younger children but also implied a nascent understanding of the evolving capacity of competence.

Any assessment of the place of children and children's rights in the early modern era must take account of the precarious conditions of existence. Children who survived birth and early childhood were generally closely integrated into the world of adults and the world of labor. Moreover, adults everywhere subjected children to strict rules and harsh discipline. Yet, the idea of children's special needs existed along with the notion that these needs established a public interest in children. Significantly, the early modern interest in the protection of children, including their basic right to maintenance and instruction, was rooted in anxiety that neglected children might become a liability to the community.

By the eighteenth century, a spirit of enlightened thought had begun to spread across Europe and colonial America. Numerous Enlightenment thinkers focused on childhood education in an effort to systematically reconsider the foundations and institutions of civilized society. This "long" eighteenth century (from the last decade of the late seventeenth through the first decade of the nineteenth century) engendered a pronounced sensitivity to childhood, with a clear articulation of childhood as a distinct stage of life having its own ethos and in need of its own institutions. Linked to a critique of traditional Christianity's concern with original sin, the Enlightenment adopted a view of humanity as inherently benevolent, allowing it to rethink the nature of childhood. As a consequence of this shift, debate over the use of corporal punishment emerged, leading to calls to "throw away thy rod." The Enlightenment's attention to the development of the individual child is an important milestone leading to the twentieth-century concept of the rights of the child. A brief intro-

duction to the work of two seminal Enlightenment thinkers who contributed in different ways to this development should clarify the significance of the Enlightenment in the history of childhood and children's rights.

John Locke (1632–1704), an English physician, statesman, and influential political theorist, laid some of the groundwork for a change in the conceptualization of children and children's rights in *An Essay Concerning Human Understanding*, originally published in 1690, and *Some Thoughts Concerning Education*, originally published in 1693. Among Locke's well-known ideas is his view that the mind is a "blank slate" without innate ideas; from this Locke theorized that all knowledge comes from experience. Based on this understanding of the sources of human knowledge, Locke asserted the power of education to shape the child, claiming that children turned out good or bad primarily due to their education. Convinced that nurture played a larger role than nature in childhood development, he regarded faulty education as a serious problem. Locke also believed each child developed a unique personality. He advised parents and educators to watch children at play in order to discover their true nature and then use those observations to develop an appropriately personalized plan for their education. He rejected corporal punishment and urged parents and educators to treat children as rational creatures. Locke recognized the special needs of children due to their "tender age and constitutions" and the importance of cultivating a "child's spirit, easy, active, and free." Although Locke's thinking marks an important shift in the conceptualization of childhood in the West, there are limits to his apparent child-centeredness. Locke emphasized "habit formation" in children hoping they would internalize restraint and become productive self-governing adults. He was interested in children and childhood education in so far they contributed to the development of future adults.

Jean-Jacques Rousseau (1712–1778), a radical French philosopher, took a different approach in his 1762 educational treatise titled *Emile*. Genuinely concerned with the process of growing up, Rousseau implied that children had a right to a happy childhood, characterized by freedom and closeness to nature. In the preface to *Emile*, he complained: "The wisest writers devote themselves to what a man ought to know, without asking what a child is capable of

learning. They are always looking for the man in the child, without considering what he is before he becomes a man." Rousseau did not think children should be made to reason too soon and he identified ways of knowing that he believed were not only unique to childhood but sometimes more effective ways of learning than the methods of adulthood. Rousseau proposed a profoundly modern view of childhood, one that recognized the inherent dignity of the child, the intrinsic value of childhood, and the compelling distinction between childhood and adulthood. He concluded: "Humanity has its place in the general order; childhood, too, in the span of human life; we must look upon man in mankind and the child in childhood." (*Emile* by Rousseau)

Following in Rousseau's footsteps, poets, artists, and writers of the Romantic era (which spanned the late eighteenth and early nineteenth centuries) took up and popularized his ideal of an innocent, natural, carefree, happy childhood. Romantic writers rejected Locke's utilitarian education and instead called for freeing the child's imagination. Romanticism proclaimed childhood as the best part of life, and attributed qualities of purity and innocence to the child, which enabled children to recognize truth and beauty. Ironically, this idealization of childhood coincided with the emergence of the first industrial societies, which prospered in part on the exploitation of child labor. Despite Romanticism's idealization of childhood, child-rearing practices in the early nineteenth century continued to aim at habit formation in the tradition of John Locke. Yet the Romantic's conception of childhood, derived from Rousseau, would gradually re-shape the nineteenth-century response to children and contribute to a notion of children's rights.

The end of the eighteenth century also witnessed the outbreak of political revolutions across the Atlantic world, first in the British colonies of North America, then in France, the most powerful monarchy in Europe, and eventually across the colonial landscape of the Americas. Proclaiming the "rights of man," the decades from 1770 to 1830 reshaped the political landscape of the West. Both the American Revolution and the French Revolution attacked arbitrary authority of many forms including the arbitrary authority of the family patriarch. Enlightenment child-rearing practices aiming to cultivate disciplined, self-reliant, and self-governing individuals

fertilized the political landscape on which these revolutions occurred. The arbitrary practices of fatherly monarchs no longer responded to the new conception of the family. Revolutionary legislative proposals sought to dismantle the patriarchal family and establish a new place for children in the family. In France, notable examples of these efforts are such specific provisions as the elimination of primogeniture and the institution of equal inheritance, the elimination of distinctions between legitimate and illegitimate children, the passage of a liberal divorce law, and provisions for child support as well as maternal custody claims. Thomas Jefferson wrote eloquently against the practice of primogeniture that he believed undermined republican society. After the revolution, many of the new states in the United States passed statutes that eliminated primogeniture. The French philosopher and revolutionary Condorcet drafted a plan for the public education of all children in France. Then during the most radical phase of the revolution, the National Convention attempted to create a complete system of public education for boys and girls—an effort that failed due to lack of resources as well as political turmoil. Thomas Jefferson and Benjamin Franklin both drafted wide-ranging education proposals to bolster the new citizen-based republic. Many of the new states had constitutions calling for public elementary education. In sum, the revolutionary era levied a serious blow against exclusive paternal authority by promoting the conception of the nation as a population of individuals, each with a direct relationship to the state, including children as future citizens.

Despite Enlightenment ideas, visions of Romanticism, and revolutionary era challenges, the legal situation of children remained relatively unchanged in the early nineteenth century, especially in Europe. There, the Napoleonic Code specified the legal subordination of children to their fathers until the age of twenty-one. In France, fathers retained the right of correction—the right to request a child's detention—well into the twentieth century. While fathers were obligated to support their legitimate children, they also had uncontested control over their children's wages and property. Children's rights seem to have been limited to protection against extreme abuse, such as prostituting one's children, or parental unfitness, often measured by the delinquency of children.

During the nineteenth century, the main devel-

opment regarding children's rights occurred in reference to industrial child labor. Humanitarian concerns motivated this movement in which reformers cast child laborers as defenseless victims of industrialization. Romanticism contributed to the view that industrial child labor, in contrast to farm or craft work, was unnatural. Factory work exhausted children who, as young as seven, worked sixteen hours a day in damp, poorly ventilated workplaces where whippings and dousings with cold water kept children at task. Health hazards abounded as child laborers inhaled cotton dust, metal filings, and acidic dyes while machines chopped their limbs. The image of the working child aroused popular sympathy and state intervention. Early efforts to regulate child labor occurred in England in 1833, Prussia in 1838, France in 1841, Massachusetts in 1842, and in Lombardy (Italy) in 1843. This response was both a cause and an effect of the new status of childhood as an age of innocence and development. The most significant aspect of the child labor reform movement is that it opened a public discussion about the social meaning of childhood, specifically opening the door to the radical notion that perhaps children should not work at all, that perhaps they had a right not to work, a right to a different childhood—one of physical, moral, intellectual, and social development (Alaimo 2002).

Between 1870 and 1920, government authorities and trained professionals took the lead in conceptualizing and protecting childhood, thus inaugurating the age of "child saving." Although motivated by traditional concerns about children's morality, public order, productivity, and population quality and quantity, the new "child savers" also hoped to save children so they might enjoy childhood. During these decades, the rights of children in relation to parents, employers, and others expanded in the form of rights to protection and services based on an image of childhood as a distinctive and vulnerable time of life.

The state with its army of professionals became the guarantor of these rights, challenging parental autonomy as it exercised *parens patriae*, the idea that the state is responsible for minors, the weak, and the incompetent. With children increasingly separated from adults, childhood came to be seen as a distinctive stage of life with age-specific requirements.

Although families came under much greater "po-

licing” as a result of state-sponsored child-saving measures, significant, and often beneficial, changes occurred in children’s lives. Perhaps most importantly, schooling replaced working as the normative social experience for all children. From 1870 on, laws made school attendance compulsory for children, but also made schools free, public, and professional. Child health improved steadily, in part due to the expansion of school medical services. Questioning the assumptions of family privacy and parental autonomy, professional child savers challenged parents who neglected, abused, and endangered their children. In 1889 both France and Great Britain passed laws against child endangerment including that caused by parents. In Norway, the Child Protection Act of 1896 brought children in a variety of circumstances under state tutelage, including delinquents, truants, and those neglected by their parents. A similar law passed Prussia’s parliament in 1900. Also at this time, delinquent children were removed from the adult correctional system and serviced by a new juvenile justice system. Illinois founded the first juvenile court in 1899, a practice followed in Britain in 1908 and in France and Belgium in 1912. Juvenile court operated on different principles than its adult counterpart: reform and treatment, not punishment; preventive action; indeterminate sentences that depended on a child’s response to treatment; probation or supervised freedom; scrutiny of the family itself (Alaimo 2002, Hawes 1991).

In segregating and protecting children, these public policies and institutions aided in the creation of a dependent childhood, highly regulated by adult guardians. Moreover, by the early twentieth century, child saving as a state policy targeted not only deprived children but all the children of a nation and even extended the age-definition of child to include those up to the age of twenty-one. The protection of children, limited in the early modern period to protection against extreme physical abuse and protection of property, became a dramatically enlarged field by the end of the nineteenth century. Alleged parental neglect, incompetent parenting, and the realities of poverty emerged as legitimate criteria for state intervention in the life of the child. The child’s right to protection led inexorably to the child’s right to provisions of various sorts, with the state responsible for providing these services. Children were not

only freed from work and placed in schools. Increasingly, children seemed to have gained the right to health care, sanitary housing, playgrounds, and organized recreation. As more and more children entered state-funded schools, children with disabilities captured public attention. Most teachers and school administrators found such children difficult to deal with and soon separate facilities emerged to provide for “handicapped” children. Ironically then, children with disabilities became marginalized while “normal” children benefited from the expanding terrain of children’s rights.

After the Second World War and with the rise of an international human rights movement, children’s rights entered a new era. The 1959 UN Declaration of the Rights of the Child asserts that each child has the right to a “happy childhood” and its principles bear the stamp of the traditional protection-provision view of children’s rights based on an assumption of childhood dependency and vulnerability. However, the declaration also emphasizes the individuality and autonomy of the child. The 1989 United Nations Convention on the Rights of the Child is even more explicit in this regard, asserting rights for children that would guarantee their individuality and autonomy, such as the child’s right to free expression and association. This articulation of children’s rights might be interpreted as a reaction against the overwhelming shift toward dependency and powerlessness characterized in the ideas of Romantic childhood and the practice of state-sponsored child-saving protectionism. Also, the new understanding of children’s rights, which extends to participation based on evolving capacity in matters of self-interest, can be seen as a reaction against the excessive segregation of the child from the adult that seemed to be so essential to the vision of innocent childhood.

As European and American societies fueled a demographic baby boom in the later 1940s and 1950s, the stage was being set for an explosive youth culture and a redefinition of childhood and children’s rights. From crowded elementary schools in Chicago to crowded university halls in Paris, young people in the 1960s listened to their own music on their own personal transistor radios. This generation fostered a culture of protest, but more importantly challenged the view of childhood as dependent and passive, in need of adult supervision. Instead, the voice of youth demanded greater autonomy in certain aspects of life

but especially in school discipline, school-based speech, and social life. University and secondary school students laboring under laws and social practices that treated them much like children demanded changes in dormitory rules, pedagogy, student newspaper content, and dress codes. These protests signaled the growing importance of evolving capacities and competencies.

In the United States and Europe this new trend found expression in new legal practices that provided children with a voice of their own in the courtroom. In *Tinker v. Des Moines Independent School District* (1969), a case involving antiwar demonstrations by several Iowa junior high and high school students (Wadlington et al. 1983), the U.S. Supreme Court declared that students are “persons” under the Constitution. In *Goss v. Lopez* (1975) the Court found that students could not be suspended from school without a hearing and an opportunity to tell their side of the story (Wadlington et al. 1983). In Belgium and the Netherlands, Children’s Law Shops opened to provide legal information and assistance to children. Following this trend, the Children Act of 1989 gave British children a legal voice in decisionmaking related to their welfare. As children claim legal and civil rights they interact more with adults, shedding some of the distinctiveness attributed to them in the past. This development is not without problems: How should the right of the child to be a child—dependent, protected, separated—be balanced against the right of the child to be a person, possessing rights to autonomy and participation?

Although images of childhood and children’s rights have evolved throughout centuries of history in Europe and the United States, contemporary beliefs that children have legitimate claims to make against external agents (parents, schools, employers, the state) can be found in embryonic form throughout the centuries surveyed here. The UNCRC, which embodies ideas developed in Europe and the United States, represents the accumulation of expanding notions of children’s rights to protection and provision based on their vulnerability due to age, their developmental status, the extent of parental resources, and even parental abilities. The UNCRC also asserts the principle of the best interests of the child (article 3) much like nineteenth-century reformers did. Still, the UNCRC brings to the table a new recognition of the

child’s right to a voice, and this is very much an indication of the changing view of childhood in Europe and the United States. Earlier images viewed the child as sinful, rational, malleable, and savable; the contemporary world views the child as independent and assertive. The UNCRC reflects this by acknowledging that children have the right to express an opinion in matters that concern them (article 12) and by asserting the importance of the idea of evolving capacities (article 5), as opposed to a fixed state of dependency.

The prevalent image of childhood in Europe and the United States today is in some ways a blend of Lockean and Rousseauist views: the child as a person learning to become an adult and the child as a child with its own inherent dignity, needs, and value to the community. Childhood is not adulthood and as such a child is not an adult. At the same time a child is a human being in the process of becoming an adult. The crucial characteristic in contemporary understandings of childhood today, in contrast to earlier periods of history, is that childhood and the child are no longer seen merely as preliminary to adulthood and the adult. Rather, childhood is a stage of life that has an end of its own, and the child has a value independent of the adult that may eventually emerge. Indeed, an extreme example of this can be found in popular consumer culture where children constitute the lucrative audience of age-specific programming promoted by television networks devoted exclusively to youth programming (e.g., Disney, Nickelodeon). Other examples, however, provide necessary balance. The oral history project *Teen Chicago* developed by the Chicago Historical Society in 2004 gives voice to teenage experiences both in the use of high school students as interviewers and in the collection of “coming of age” stories as valid materials for a historical exhibit. In June 2003, the European Children’s Network organized a conference on “Children and the Future of Europe” that brought together European young people aged twelve to seventeen to debate the future of children in the European Union with representatives from EU nations working to draft an EU constitutional treaty (European Children’s Network 2004).

Kathleen Alaimo

PHILOSOPHICAL AND PSYCHOLOGICAL PERSPECTIVES ON CHILDREN'S RIGHTS

The language of rights in relation to children is confusing at best. Any discussion of children's rights must recognize the challenges, even paradoxes, inherent in promoting rights for children. The right of the child to personal freedom and autonomy may undermine the right of the child to care and protection. For example, juvenile curfew laws, already widespread in the nineteenth century and upheld in modern constitutional challenges, limit the personal freedom of a child while claiming to offer protection from the dangers of the street to those who are underage. A similar tension is revealed in the application of child labor restrictions that limit the freedom of children to work and contribute to the support of their families in the name of the child's right to protection against economic exploitation. The right of parents to consent (or not) to medical treatment for their minor children is generally supported on the basis that children may not fully understand the medical picture, and yet this same right of parents to consent to treatment has in the past permitted parents to impose involuntary psychiatric hospitalization on their children. These examples demonstrate the profound philosophical difference between the principle of child protection and the principle of child liberation. Given the universal dependence of children on others (to varying degrees throughout their childhoods), the psychological concept of "competence to consent" has emerged as a central issue in many philosophical and legal discussions of children's rights.

Philosophers who study ethics bring some perspective to the discussion of children's rights by exploring essential questions that mediate between the theoretical and applied. Should children be treated differently than adults? What arguments would justify different treatment? What arguments support treating adults and children in the same fashion? Is the language of rights appropriate in discussions of children, or the family in general? Do children have the capacity to exercise the claims of rights-holders as articulated in western liberal philosophical thought? Do rights protect interests or choices or

both? How might the distinction between rights exercised on behalf of children (to protect interests) and rights exercised by children (to protect choices) further the discussion?

Historically, philosophers did not consider children as being capable of exercising rights though many defended the notion that children possessed rights to maintenance or protection, and often placed the obligation to meet those requirements on fathers who also enjoyed substantial, if not unlimited, control over their offspring. John Locke, the influential seventeenth-century political philosopher, arguing that the capacity to reason lay at the heart of the ability to exercise rights, stated that children fell under their parents' authority during their period of minority precisely because they did not possess a fully developed capacity to reason. Not surprisingly then, Locke emphasized the importance of childhood education to train young people in the development of their rational capacities. John Stuart Mill, a leading political thinker in the nineteenth century, also acknowledged that "maturity of faculties" was a prerequisite for the exercise of liberty (Ladd 2002). Children, he said, must be protected against their own actions as well as against possible external sources of harm. Many contemporary philosophers have continued to argue in this vein, emphasizing that children are different from adults in morally significant ways. The inability to reason and judge, to protect and guard, emerge as the primary obstacles to children exercising rights. At the same time, these very qualities support the argument in favor of protection rights for children, rights most often exercised on behalf of children.

To the philosophical questions must be added a series of psychological insights. What are the differences between children and adults, and what is the significance of these differences in the discussion about rights? Consider the comparison with gender differences. In the past, many intelligent thinkers argued that not only are men and women different but also that these differences are substantial and significant in relation to the exercise of rights. Historically then, the denial of equal rights to women was rooted in an assessment of the relevance of gender differences. Advocates of women's rights argued that most differences between men and women were the result of environment (education, social roles, etc.) and those differences that remained after accounting for differ-

ences of opportunity were morally and politically irrelevant. Advocates of children's rights face a different task because the differences of developmental age are of a fundamentally different order than gender differences. No amount of intensive educational and socialization effort can produce a five-year-old who can reason and evaluate choices the way a twenty-five-year-old can. In discussions about children and their rights, psychologists suggest that information about competence is essential. Moreover, the notion of "evolving capacities" is critical to any assessment of a particular child's capacity to exercise rights of choice, control, or autonomy. The question of children's competence then is fundamental to any discussion of children's rights to self-determination. While philosophers have grappled with the ethical and practical implications of two important concepts—"best interest of the child" and "evolving capacities of the child"—psychologists have worked to clarify developmental trends in children's competencies. Research on children's hypothetical (laboratory) and real-life problem-solving abilities and their vulnerability to social influences have informed philosophical analysis of the viability of children's rights.

Contemporary philosophical discourse on children's rights centers on what kinds of rights children possess as members of the human family. It is assumed that the use of rights language is appropriate when discussing serious, strong, valid, justifiable claims. For example, we might reasonably refer to the right to trial by jury but not to the right to desert. Rights language refers then to justifiable entitlements that an individual can legitimately claim and that another individual is obliged to respect or fulfill. Since children have long been recognized as entitled to certain basic supports (i.e., nourishment, maintenance), the contention in philosophical discussions is whether children are entitled to liberation rights as well as protection rights; that is, are children entitled to the same rights as adults? Identifying openly the differences between protection rights and liberation rights serves to clarify the complications involved in this exercise.

That children are humans in the process of learning about morality, that they have limited life experiences to use as the context for decisionmaking, that they require a period of protection during which they can "practice" decisionmaking without risk of permanently damaging consequences, that parents have

an interest in doing what is best for their children, and that ever-changing social conditions shape children's lives are important factors that support emphasizing protection rights over liberation rights. That adults may not always recognize what is in a child's best interest, that a child of fourteen is more capable than a child of four, that capacity to reason and judge evolves over time and with more varied experiences, that children may have distinct but valid viewpoints to contribute, and that competency may be task-specific are equally important factors and tend to support an emphasis on liberation rights, at least on a sliding scale.

When pondering the foundations of the "good life," philosophers often take into account the balance between justice, equality, and liberty. They consider also utility and consequences. In the tradition of Western political philosophy, it is understood that each individual knows what is best for himself or herself but that there is a limit to how well an individual understands the best interests of another. However, the relationship between adult and child is often seen as being outside this framework. Traditionally, children are said not to possess sufficiently developed understanding about their own needs to know what is in their best interests, especially long-term interests. A philosophical objection to this position suggests that there is no sound reason to assume that an adult individual has any greater understanding of what is in the best interest of the child than such an adult would have in relation to another adult. In other words, when an adult makes a decision for a child, the adult does so with a lot of blind spots, perhaps no more than the blind spots a child with only partially developed capacities has. In this scenario, recognizing that children have the right to make decisions supports justice, liberty, and utility.

The articulation of a philosophical basis for children's rights also serves to underscore the insistence on justice. The demand for rights is usually situated in a context in which there is a perception of discrimination or injustice. The call for rights implies that something legitimate and deserved is being denied or compromised. Though philosophical disagreement abounds on the question of children's rights, the debate itself has raised interest in the possibilities of altering social relationship involving children and the consequences that would result. Thus even philosophers who have argued against libera-

tion rights for children acknowledge that child neglect and abuse are critical problems requiring rigorous attention and that children, especially teens, probably need to have more rights, especially civil rights, than they currently possess. At the same time, philosophical perspectives demonstrate the radical nature of children's rights. When someone claims a right, others are obliged to act in a certain way so as to make it possible for the right-holder to claim his or her right. When applied to parent-child relations, such claims on the part of children would require parents to act in particular ways. Such constraints on parental autonomy represent a departure from historical parent-child relationships. Typically, parents grant children increasingly more independence in decisionmaking as children become more mature; and typically, parents see this "grant" as a privilege that can be revoked if it is misused, either deliberately or unintentionally. In contrast, recognizing the child's right to participate in decisions that affect his or her life seems to challenge parental authority and autonomy.

Another important philosophical perspective on children's rights is one that can be found in the United Nations Convention on the Rights of the Child (UNCRC). There the call is for all of the world's children to enjoy the dignity inherently possessed by all members of humanity and to hold the equal and inalienable rights afforded all members of the human family. However, this emphasis is situated within the clearly articulated claim, repeated several times throughout the preamble of the UNCRC, that children deserve and require special care and protection due to their physical and mental immaturity. The philosophical claim then is this: children must be treated as persons, as humans, but they are to be treated as humans who are children not adults. This insight affords the best possibility for balancing protection rights and liberation rights in a morally relevant fashion and with appropriate consequences for justice in the world.

A growing body of research from developmental psychology supports and advances this philosophical breakthrough. Much of this research is in the area of children's competence to give or refuse consent and this work has significant implications for the legal standing of young people as well as for the larger picture of children's right to participate in decisionmaking that affects them whether

at home, in school, in state care, at work, or in the doctor's office.

Developmental psychologists have gathered systematic empirical data on the ability of children at various ages to make competent decisions. This research conclusively demonstrates two key findings. First, that teens as young as fourteen are as capable as adults of evaluating the information and choices related to medical and mental health treatment, reproductive health, and research participation. Second, that these teens make reasonable decisions. In addition, there is hypothetical (laboratory) evidence to suggest that even younger children generally make the same decisions as adults though they are usually less likely to be able to articulate the same reasons adults give for their choices. Other research avenues have explored the qualities that characterize maturity in minors, such as how they obtain and evaluate information, whom they consult, whether they conform to peer or parental advice, and how well they reason. Perhaps the most fruitful research investigations have explored how the concept of evolving capacities functions in the decisionmaking of young people. Many developmental psychologists have suggested that not only are there stages to the development of the cognitive abilities needed to make competent decisions but also that early practice at age-appropriate decisionmaking encourages the continued and more effective development of competence. The influence of this research is seen in the practice of clinicians who in the vast majority of cases attempt to obtain adolescent informed consent for psychotherapy. Surveys of psychologists suggest that they generally ask for consent at an average client age of 12.8 years. Research on adolescents' decisionmaking skills suggests that over the course of junior high and high school years, teenagers' ability to evaluate advice given by others (including those with vested interests as well as independent specialists) increases significantly. This parallels the body of psychological research and theory that identifies significant cognitive changes in early adolescence, whereby young teens develop the ability to think hypothetically and weigh possible futures and evaluate the varied consequences of their actions. A major finding then of developmental research over the last two decades is that there appear to be few differences between minors (younger or older)

and adults in decisionmaking skills or competence. When differences do emerge, researchers have generally attributed them to differences in knowledge or experience rather than to differences in actual reasoning capacity. In fact, it is widely acknowledged by researchers who study formal operational thinking that the overwhelming majority of adults never develop better reasoning skills than what they achieve in early adolescence, although adults may act better based on accumulated experience. As a result, experiential learning becomes an important component in the ongoing development of competence to reason.

Psychologists have established a firm research foundation for setting the threshold of the competence to consent in the age range of twelve to fourteen years old. Studies exploring the developmental issues within contexts such as consent to medical treatment or experimentation, special education placement and services, and even waiver of Miranda rights have reached similar findings regarding the ability of certain minors to be competent decisionmakers. As a result most states in the United States have statutes that require family court judges to solicit and consider a child's expression of custodial preference in divorce hearings or that require some young teens to be tried as adults in the criminal justice system.

Moreover, while developmental psychology has provided substantial empirical support for giving significant weight to the reasoned views of those fourteen and older and for allowing the participation of younger children in certain decisions, such as custody arrangements, in fact, the psychological perspective emphasizes the importance of individual evaluation that is task-specific. Thus, the child's right to consent to psychotherapy, the child's right to participate in custody decisionmaking, and the child's right to privacy in reproductive health decisions present different reasoning challenges and carry different consequential considerations. Developmental psychologists are cautious to point out that research on children's competence to consent can contribute to the public discussion of whether and under what circumstances children have a right to consent, but cannot completely determine the answer which remains a legal and ethical one.

Kathleen Alaimo

CHILDREN AND JURISPRUDENCE

The place of children in the jurisprudence system of the United States has evolved dramatically since the nation's founding. In the common law traditions imported from England, children seemed to be little more than their father's property. The spread of classical liberalism and legal egalitarianism as embodied in the American Declaration of Independence and the Bill of Rights did not alter the status of children under the law. In contrast, the industrial revolution had a dramatic, if paradoxical, effect. Initially, industrialization seemed to cause deterioration in the status of children particularly in areas such as apprenticeship. Traditionally, apprentices might look forward to learning a skill from a master artisan but under the assault of industrialization, young workers found themselves engaged in increasingly unskilled or semiskilled labor, unprotected by apprenticeship contracts that had formally stipulated work conditions and living accommodations, skills to be taught, and the duration of the apprenticeship term. Apprenticeship contracts, enforceable in court, provided some protection not only to the child apprentice but also to his or her family. As industrialization spread, so too did the demand for cheap, unskilled, pliable workers. This contributed not only to the decline of the artisanal trades but also to the virtual elimination of apprenticeship contracts. The child laborer emerged as a symbol of industrialization's devastating impact on the skilled crafts. In time, the plight of child laborers caught the attention of social reformers who made the legal regulation of child labor a passionate cause. From the regulation of child labor to other aspects of child welfare, the state and the courts became increasingly involved in the disposition of children's lives. Thus, eventually industrialization brought children into the legal environment as legitimate concerns of the state, not "father's property." The 1874 case of "Little Mary Ellen Wilson," an abused New York child who was rescued through the use of anti-cruelty to animals statutes (Alaimo 2002, Hawes 1991), led not only to the founding of the Society for the Prevention of Cruelty to Children but also to more persistent intervention into the privacy and autonomy of the family based on the premise that even children have some rights.

By the early twentieth century, American jurispru-

dence came increasingly to recognize not only the specific interest of child welfare but also the maternal interest in children's well being. The concept of the "best interest of the child" became more widely applied, especially in negligence and custody cases involving poor children. One result is that courts began to support poor mothers in their efforts to rear their children, including illegitimate children. And state legislatures established funding programs to support poor children within their families. A 1911 Illinois law, known as Funds to Parents, pioneered the requirement that juvenile court orders state support to worthy parents of troubled children. Within a few years, thirty-nine states as well as the territories of Alaska and Hawaii had established funds to support poor children in their own homes. To some extent this development suggests an effort to recognize the rights of children to maintenance, support, care, family, and home while at the same time attempting to preserve the family and the role of parents. The state, acting through the courts, became the "superparent," supervising the family and dissolving the old common law relationship between parents and children that had protected the autonomy of parents in childrearing (Mason 1994, Fass and Mason 2000, Alaimo and Klug 2002).

Beginning in the late 1960s, a new trend emerged in American jurisprudence regarding children. An increasing number of court cases sought to clarify, and in some cases expand, the legal rights of children. While court cases from the late 1960s through the late 1980s failed to establish a clearly consistent set of principles and interpretations, one important and influential claim emerged: the legal principle that children do indeed have (some) rights under the United States Constitution. This principle emerged as a result of an increasing number of cases brought before the courts that raised questions about the rights of children to education, free speech, privacy, and due process, and the disposition of the rights of children in relation to the rights of parents.

In general, the status of children in American jurisprudence is not dictated by universal or consistent criteria. Rather, there is a great deal of variability in the legal status of minors. As implied in the introduction to this chapter, children are treated differently depending on whether the issues concern tort law, contract law, civil rights law, family law, or other matters. In some areas, children are treated with a

highly "protectionist" hand while in other areas they are given responsibility for their actions. Changing attitudes towards the rights of parents as well as better understanding of the evolving capacities of children have played a role in how the courts treat minors. Nonetheless, the result has been to produce a body of case law that moves between two poles: one giving young people a greater amount of autonomy in decisionmaking about their own lives and the other protecting young people from others, their environments, and even themselves. In current jurisprudence, young people have a measure of control in decisions about reproductive health, including abortion, as well as in decisions relating to legal emancipation. In contrast, the law protects, and thereby limits the autonomy of, young people in areas such as contracts, employment, and free speech.

A number of landmark cases have shaped the place of children in American jurisprudence. In particular, the United States Supreme Court decided a number of important cases in the twentieth century concerning children's rights, parents' rights, and state authority, marking a departure from the federal courts' long-standing practice of avoiding family law. In *Meyer v. Nebraska* (1923) and *Pierce v. Society of Sisters of the Holy Names of Jesus and Mary* (1925), two cases that are often viewed as early examples of "children's rights" in the courts, the most pressing issue at stake involved the rights of parents to raise their children as they saw fit without interference by the state.

In *Meyer v. Nebraska*, which involved an appeal from a teacher convicted of violating a 1919 Nebraska statute against the teaching of foreign languages in public or private schools, the Court supported the teacher as well as students and parents against unreasonable intervention and regulation of the state. The Court noted that students have a right to learning opportunities and parents have a right to engage teachers to instruct their children in subjects they deem valuable. At the same time, the Court acknowledged the right of the state to compel school attendance and to make reasonable regulations for schools. The Court concluded: "It is well known that proficiency in a foreign language seldom comes to one not instructed at an early age, and experience shows this is not injurious to the health, morals, or understanding of the ordinary child" (Wadlington et al. 1983). While this case has often been identified as a pioneer case in the rights of children, in fact the teacher was the plaintiff and

the role of parents in determining the education of their children (a “right of control”) figured prominently. The liberty interest of children occupied a modest place in the decision.

In *Pierce v. Society of Sisters* the Supreme Court again supported the rights of parents against state authority in an educational matter. The Oregon law in question required every school-age child, with few exemptions, to attend a public school. The Society of Sisters had operated orphanages, schools, and colleges for over forty years providing both secular and religious education. The Society argued that parents had the right to the school of their choice and that children had the right to influence their parent’s choice. Following the principle established in *Meyer v. Nebraska*, the Court acknowledged the state’s interest in requiring school attendance but argued that the statute unreasonably interfered with the liberty rights of parents to direct the education of their children. The Court used broad language in its decision, including the right of parents to direct their children’s “upbringing.” The Court concluded: “the fundamental theory of liberty . . . in this Union . . . excludes any general power of the state to standardize its children by forcing them to accept instruction from public teachers only. The child is not the mere creature of the state” (Wadlington et al. 1983).

In contrast to its rulings in *Meyer v. Nebraska* and *Pierce v. Society of Sisters*, the Supreme Court in *Prince v. Massachusetts* (1944) favored the right of the state to interfere in the decisions of parents with regard to the upbringing of their children. The case involved a guardian (an aunt) who provided her charges with religious pamphlets to be sold on the streets, thereby violating a Massachusetts statute prohibiting children from selling print materials in public places, part of the state’s comprehensive child labor law. Mrs. Prince indicated that the children themselves asked to participate in the street sales of Jehovah’s Witness materials. The Court ruled that the state had an interest in protecting children and that neither children’s rights to religious freedom nor parental rights are absolute. The Court noted that the state often acts to restrict parents’ rights to autonomy through measures such as child labor regulations and compulsory school attendance. The Court reasoned that the state had greater authority to regulate the activities of children than those of adults, especially public activities and employment, and that

it would be ludicrous to think that children should have the same access to public places and public activities as adults. And although the Court conceded that “it is true children have rights, in common with older people, in the primary use of the highways” it nonetheless demonstrated its willingness to affirm legitimate state interest in the “health and welfare” of its future citizens and to circumscribe the autonomy of parents: “Parents may be free to become martyrs themselves. But it does not follow they are free . . . to make martyrs of their children before they have reached the age of full and legal discretion when they can make that choice for themselves.”

In 1968, the Supreme Court reinforced its stance in *Prince* in a case that revolved around the sale of sexually explicit print material to a sixteen-year-old minor. In *Ginsberg v. State of New York*, the Court again argued that the state had greater authority in the regulation of children than adults and that the state had a compelling independent interest in the well being of children. Since the materials in question were not regarded as obscene for adults (persons seventeen years of age or older), the Court affirmed that it was constitutionally valid to regulate the dissemination of pornography to children based on the notion that the concept of obscenity can vary depending on the population targeted. The Court denied that such regulation infringed on parents’ rights to autonomy in the upbringing of their children, arguing that parents could purchase pornography for their children if they so wished but that the state had an obligation to regulate the direct sale of pornography to children since “parental control or guidance cannot always be provided.”

By the late 1960s and into the 1970s, a barrage of cases involving children’s rights emerged. While some of these cases continued to mediate the relationship between parents’ rights and the state’s role of *parens patriae* (parent of the state), increasingly the focus came to be on the distinct issue of children’s rights—to free speech, to due process. *Tinker v. Des Moines Independent Community School District* (1969) has been characterized as the first genuine children’s rights case decided by the Supreme Court. The case involved the right of junior high and high school students to wear black armbands protesting the American war in Vietnam despite a school policy prohibiting this. The students wore the protest armbands and then were suspended from school and

sent home when they refused to remove them. Treated as a First Amendment issue, the Court decided that students' rights to freedom of expression outweighed the school's concern for order and discipline. Noting that the students' armband protest did not cause any disruption in school, the Court supported the students' right to express an opinion. In a statement that has become famous, the Court wrote: "It can hardly be argued that either students or teachers shed their constitutional rights to freedom of speech or expression at the schoolhouse gate." Interestingly, one of the concurring justices nonetheless questioned whether children's rights are "co-extensive" with those of adults and opined that children do not possess the "full capacity for individual choice which is the presupposition of First Amendment guarantees." It should be noted that the suit was filed by the fathers of the students involved, leading some legal scholars to claim that the Court was really supporting parents' rights or family rights and not affirming the right of children to exercise choice rights independent of their parents.

In 1975, the Supreme Court decided the case of *Goss v. Lopez* in which students had been suspended from school without notice or an opportunity for a hearing. Claiming that compulsory education laws at the state level had the effect of creating a property interest, or a right to education, the Court ruled that students were therefore constitutionally entitled to due process before they could be deprived of their property through suspension, even for short periods of time. The Court did not concede that students were entitled to full-blown due process considerations such as "the opportunity to secure counsel, to confront and cross-examine witnesses . . . or to call his own witnesses." Rather the Court declared, in a very close ruling, that some type of notice and effective hearing are required to permit "the student to give his version of the events." The dissenters questioned the impact of due process considerations, such as formal hearings, on the ability of school administrators to carry out effective discipline. The Supreme Court revisited this issue in *Ingraham v. Wright* (1977), a case concerning corporal punishment in the schools. The Court decided that corporal punishment did not constitute "cruel and unusual punishment" but represented a historically accepted manner of discipline with common law restraints available. Secondly, the Court declared that it was

unnecessary to impose "additional administrative safeguards" of a due process nature because these would unduly interfere with the school's ability to carry out disciplinary policies. The Court noted that this case was different from *Goss v. Lopez*, because corporal punishment did not result in students being deprived of their property interest in education. Taken together these two cases suggest a very tentative movement toward recognizing that children might be protected under the Fourteenth Amendment's due process clause but not a strong trend in that direction.

Another important area of jurisprudence in the 1960s and 1970s, which has continued to the present day, concerns changes in the juvenile justice system. In the first quarter of the twentieth century, ambitious efforts to create special courts for juveniles came to fruition, first in Illinois (1899), and then across the nation. Several distinctive features marked the new world of juvenile justice. First, not only delinquent but also neglected and dependent children under sixteen would be handled in the new courts. Second, the new courts aimed at rehabilitation not punishment. Third, to avoid creating any social stigma, all proceedings would be confidential, if recorded at all. Fourth, separate facilities for the detention of children were required. And fifth, juvenile court proceedings would operate "informally," that is not according to traditional legal models but more in accord with the growing therapeutic aims of medical and psychological care. The reformers who helped to create this new system were motivated by a myriad of concerns, including a very real interest in redefining childhood and adolescent dependency, limiting parental autonomy rights, and expanding the role of the state in the guise of professional social workers. The reformers were little concerned with a child's liberty or its parents' autonomy and more concerned with the need to protect, care for, and save troubled children. An extremely expansive vision of juvenile delinquency, its causes, and its cures, shaped the founding of the juvenile justice system in the United States. This included a significant increase in the number of "status" offenses—actions that constituted misdeeds only if committed by a minor, such as curfew violation or cigarette smoking. The course of the twentieth century demonstrated the difficulties facing reformist social welfare goals while the denial of legal protections to young offenders created other

serious problems. With juvenile courts historically understaffed and overworked, the innovative possibilities imagined in the establishment of community-based supervision and probation were limited. Many juvenile court judges lacked specialized training in children's law and often did not have the adequate services of probation officers, psychologists, or social workers. Soon, the absence of certain procedures in juvenile hearings, such as notice of the charges, right to an attorney, protection against self-incrimination, right to a transcript of the hearing, and right to appeal seemed less tolerable when social services were in short supply.

The 1966 Supreme Court case of *Kent v. United States* marks the first attempt to visit the question of oversight and monitoring of the juvenile justice system. In that case, the Court observed "There is evidence, in fact, that there may be grounds for concern that the child receives the worst of both worlds: that he gets neither the protections accorded to adults nor the solicitous care and regenerative treatment postulated for children." The next year, in what became a landmark case, the Court took up *In re Gault*, another case concerning the due process rights of juvenile offenders. The Court took the stand that due process of law, fundamental to American freedom, has a place in juvenile proceedings. In other words, the mere fact of being a child does not mean that legal protections are unnecessary: "Under our Constitution, the condition of being a boy does not justify a kangaroo court. . . . So wide a gulf between the State's treatment of the adult and of the child requires a bridge sturdier than mere verbiage, and reasons more persuasive than cliché can provide." However, the Court did not go so far as to say that minors were entitled to all the due process provisions to which adults enjoyed access in the criminal justice system. In fact, the majority opinion noted that the introduction of some due process requirements would make the juvenile court more orderly but not necessarily unkind.

Following *Kent* and *Gault*, the trend in juvenile justice has been to increase the procedural rights available to juvenile offenders while at the same time increasing their legal responsibility. Transfers between juvenile court and adult court have increased dramatically. Belief in the rehabilitative ideal has faded, evidenced by the reintroduction of capital punishment not only for adults but even for mature mi-

nors. Juveniles facing the adult criminal system are less likely to receive special consideration due to age. Still, the juvenile court system has been successful not only in the United States but also throughout a large part of the world and its basic premise is articulated in the United Nations Convention on the Rights of the Child. Keeping young offenders out of adult criminal courts is still a widely held goal and successful practice, despite rejection of the original and highly interventionist goals of juvenile court, founders. The post-*Gault* period in juvenile justice has been marked then by the tense co-existence of two principles: increasing due process provisions for youth and continued consideration of the social welfare needs of youth. The 1974 *Juvenile Justice and Delinquency Prevention Act* (Zimring 2000) stands as the first major federal legislative initiative following *Gault*. It aimed to finally separate youth offenders from adults in confinement, and it aimed to deinstitutionalize status offenders, such as truants and runaways. As law-and-order toughness spread across the United States criminal system in the 1980s and 1990s, the rate at which young adults (age eighteen to twenty-four years) were incarcerated in prisons far outstripped the rate for juveniles (age fourteen to seventeen years), suggesting that the juvenile justice system continued to succeed in meeting the goal of protecting youngsters from the reach of the harsh adult criminal justice system, the original goal of the juvenile court system. Despite a number of shocking and high-profile cases of youth violence and criminality which has fostered a fear of "juvenile super-predators" and calls for tougher treatment, the juvenile court system still offers a "jurisprudence of patience and restraint" (Zimring 2000, 2494) with regards to youth offenders who are engaged in the developmental process of growing-up. Not only the courts but also the public still accept the idea that young people are not fully responsible for their trespasses and therefore should be given the second chances afforded by the juvenile justice system.

The law related to custody and parenting rights has undergone dramatic change in the last twenty years. Neither the common law notion of "father's property" nor the modern idea "maternal preference" dominates custody law. Instead, the principle of "best interest of the child" has emerged as the legal standard, meaning that judicial decisions ought to advance the child's interest. The best interest standard

requires a rigorous mode of rational decisionmaking on the part of the judge. To apply such a standard, a judge must have sufficient information, the ability to make predictions of probable outcomes, and a value system to inform the choice. Researchers in the field of psychology have offered conflicting findings on matters related to predicting and evaluating the possible consequences of various dispositions for children in custody conflicts. Moreover, the best interest standard has been called "indeterminate" because it allows too much personal bias to enter into decision-making. In custody cases that involve placements with adults other than biological parents, the "best interest of the child" principle seems to promote the idea of "psychological parenthood." This radical idea emphasizes the ability of an adult to meet the child's need for both psychological and physical well being on a daily basis without regard for the privilege of biological parenthood. Despite the considerable challenges involved in applying the best interest of the child standard, it remains a relevant legal standard in American family jurisprudence. Contemporary controversy revolves around how to ascertain the best interest of the child and present it in court.

Several highly publicized cases underscore the challenges in weighing parents' rights and children's preferences. In the 1980s, Walter Polovchak and family arrived in the United States from the Soviet Union. Soon the parents decided they wanted to return to the Soviet Union but their son insisted on staying in the United States. He ran away from his parents and was soon granted political asylum and made a ward of the state. Despite what looks like a case of a child's preference trumping his parents' rights, this case (*Polovchak v. Meese*, 1985) must be seen in light of Cold War politics of the 1980s. Even the American Civil Liberties Union questioned whether parents could be deemed unfit just because they wanted to return to their homeland.

A similar case surfaced in 1999 regarding Elian Gonzales, a five-year-old child refugee from Cuba. His mother and stepfather had died while trying to leave Cuba when their overloaded boat capsized in the waters between Cuba and Florida. Rescued by fishermen and brought to a Miami hospital for treatment, U.S. Immigration and Naturalization Service (INS) then placed Gonzales in the custody of Cuban exile relatives in Miami, although his father and grandmother still lived in Cuba. A legal battle, as

well as a political battle, ensued. The legal issue involved the father's right to custody of his child unless he could be proved negligent or abusive, but it also mixed family law with immigration law, especially laws governing political asylum. The political issue drew anti-Cuban and anticommunist sentiments into the mix. Lawyers for the INS and eventually the U.S. attorney general argued that the "best interest of the child" principle required that Elian be reunited with his father, other Cuban relatives, his schoolmates and teachers, and his hometown. Elian's Miami relatives filed petition after petition to keep him in the United States and in their care, which they believed offered him a better future. Protests abounded as the question of who had the right to speak for Elian sharpened. Hardly anyone agreed that Elian, by then six years old, had the capacity to contribute anything to the discussion. In April 2000, armed federal agents stormed the Miami home in which Elian had been living, took him from a closet in which he had been hiding, and flew him to a rendezvous with his father. In June 2000, a federal appeals court ruled that Elian Gonzalez did not have the right to an asylum hearing, as a result of petitions filed by his Cuban American uncle and under his own name. A few weeks later, the U.S. Supreme Court rejected a last minute appeal and Elian returned to Cuba with his father. To a large extent political issues overshadowed the children's rights issues in this case. Does a six-year-old child have the capacity to apply for political asylum? If not, who can best represent the interests of the child? Does the child's parent, even if from a communist state like Cuba, have a certain privilege to speak for such a child? The federal appeals court agreed with the reasonableness of the INS's position that a six-year-old did not have sufficient capacity, and compared this to the Polovchak case when a twelve-year-old was regarded by the courts as being "near the lower end of an age range in which a minor may be mature enough to assert" an independent asylum claim. In fact, the court supported as reasonable the decision of the INS to weigh the competing interests of the child, the parent, and the public but to give "paramount consideration to the primary role of parents in the upbringing of their children." Significantly, Elian's "right" to maintain his relationship with his biological father, who although divorced from Elian's mother had had regular involvement with Elian, re-

ceived only limited discussion in the public debates. The case highlighted the difficulties of applying the “best interest of the child” principle in cases of very young children who may not be able to articulate their own interests and underscored the need for independent child advocates. Even more so it highlighted the difficulties of making reasonable decisions in a heated political situation.

In the highly charged 1992 Florida case of Gregory Kingsley, the conflict between parental rights and children’s rights exploded. In this case, twelve-year-old Gregory won the right to hire his own attorney and file a petition to terminate his mother’s parental rights. Although the case was widely reported as an attempt to “divorce his parents” it was more importantly about the right of a child to be heard in court. Gregory’s mother had placed him in foster care. He came to believe that she was a negligent parent who had abandoned him and that he deserved a chance for a better life. He wanted to terminate her parental rights so his foster family could adopt him. Termination of parental rights is not easily arrived at; it requires convincing evidence of abuse, neglect, or abandonment. The case was complicated by the fact that Gregory’s mother was divorced, unemployed, and poor while his foster family was well off. The central legal feature of this case was whether or not Gregory had the legal standing, that is judicial personhood, to sue in court as a minor, despite his young age (eleven at the time of the initial proceedings). In addition, the case raised questions about whether or not children have a right to adequate parenting, which in turn raises questions about what constitutes “adequate” or “negligent” parenting and who decides. Finally, the case highlighted the crisis that millions of children in state care face. Before placement with the family he wanted to adopt him, Gregory had been moved around the state’s foster care system so much that he begged simply for “a place to be.” Following widespread media and public frenzy, the Florida Court of Appeals overturned Gregory’s right to sue in court, saying he lacked the capacity to do so. Then the protective services agency responsible for Gregory filed its own petition to have his mother’s rights terminated; the court granted this petition and Gregory’s adoption by his foster family was allowed to stand. As Lewis Pitts, director of the Legal Action Project of the National Committee for the Rights of the Child has

stated, “In short, the court recognized that Gregory had a meritorious claim, but denied his right to knock at the courthouse door on the grounds that he was a minor” (Pitts 2002, 168).

Thus despite a growing tendency to recognize that children are persons under the Constitution, there are still many areas of the law that continue to treat children and adults differently. Court decisions have continued to limit the rights of students in schools to free expression and privacy. In *New Jersey v. T.L.O.* (1985), school authorities were given a less restrictive standard to meet regarding searches of students’ possessions on the ground that they are responsible for maintaining an orderly environment. *Hazelwood School District et al. v. Cathy Kuhlmeier et al.* (1988) found that schools could impose reasonable restrictions on the content of school-sponsored publications without being in violation of students’ First Amendment rights. And in 1995, the United States Supreme Court allowed the practice of random drug testing of student athletes to stand (*Vernonia School District v. Acton*). These and other cases suggest that the expansion of legally recognized rights for children has not been unlimited.

History, legal precedent, social science research, and philosophical reflection shape contemporary American jurisprudence regarding children. The result is that children have more explicitly delineated rights that are recognized in courts of law than at any other time in history. Not only do children enjoy constitutionally guaranteed rights to due process in juvenile court proceedings but also they often have access to lawyers whose assigned duty is to represent the voice and interest of the child. Medical practitioners recognize that children have the right to refuse treatment and are learning how to support such decisions. With the findings of developmental psychology, children and their counsel have been able to convince courts that competence to obtain an abortion, refuse mental health treatment, mount a defense, or request particular custody arrangements does not set in arbitrarily at age eighteen or twenty-one.

The place of children in American jurisprudence had changed dramatically in recent decades. At least in principle, the U.S. Supreme Court and lower courts have recognized that a child is a person with rights and should be treated as such. In practice, there is substantial disagreement about whether this means

that children should be treated like adults. The state of jurisprudence suggests that lawyers, judges, researchers, and scholars have not yet developed principles and criteria for determining consistent policy and law related to the decisionmaking capacity and legal responsibility of children. The most promising new direction in this regard is the call for a jurisprudence regarding children that emphasizes processes of involvement by various parties with potentially diverse interests. In this scenario, the acknowledgment of children's rights in the courts means that lawyers and judges must consider children's particular needs and voices in the balancing act that precedes a decision.

Kathleen Alaimo

CHILDREN'S RIGHTS WORLDWIDE

Any discussion of children's rights in the world of the twenty-first century must weigh the contrast between the reality of impoverishment and mortality that characterizes the lives of so many of the world's children with the significant progress that the idea of children's rights has made in international treaties, national charters, and public policy. For example, the United Nations Convention on the Rights of the Child (UNCRC) is the most widely ratified international human rights treaty in the world. When the United Nations opened the convention for signatories in 1990, the opening day broke records for the number of nations to sign on. It obtained the required number of signatures faster than any other human rights treaty. Today, it has been ratified by nearly all member nations of the United Nations with the significant exception of the United States (where it has been signed by the President but not ratified by Congress). As the European Union moves towards greater integration and cooperation, its constitutional convention produced a draft constitution in 2003 that makes several references to the protection of children's rights. Moreover, advocacy on children's rights is not limited to the West but has been embraced from Pakistan to South Africa, from Vietnam to Brazil. Implementation and monitoring of the relatively new African Charter on the Rights and Welfare of the Child (1999) has been led by the African

Network for the Prevention and Protection Against Child Abuse and Neglect (ANPPCAN). In Venezuela, an organization known as MOANI is led by children and young people to facilitate promotion of children's rights, especially in poor urban and rural communities. UNICEF, established in 1946 and perhaps the best known of the international children's protection organizations, has made children's rights central to its work during the last decade. Children's rights have become part of the international dialogue.

The UNCRC is a pivotal document in the development of the international children's rights movement. The near universal ratification of the UNCRC gives it significant international legitimacy and most of its provisions have taken on the status of international customary human rights law. The UNCRC includes forty-five substantive articles introduced by a brief preamble. After defining a child as "every human being below the age of eighteen years," the UNCRC identifies the conditions nations (referred to as "States Parties" in the convention) must protect in order to ensure that children are able to enjoy their inalienable human rights. A key feature of the UNCRC is the emphasis it places on the role of the family in the upbringing and care of the child and the obligation it assigns to the state to provide parents with the assistance and resources needed to rear their children. Various articles support family integrity and unity. Article 18 states that parents have the *primary* role in the upbringing and development of the child. At the same time, the UNCRC states that the child's best interest should be "*a* primary consideration" in "*all* actions concerning children, whether undertaken by public or private social welfare institutions, courts of law, administrative authorities or legislative bodies." Article 18 states that parents or legal guardians should have as "their basic concern" the best interest of the child. And the UNCRC declares that children who are competent to form their own views ought to have the right to express those views, directly or through a representative, and to have their views given "due weight in accordance with the age and maturity of the child." The concept of "evolving capacities" is repeated throughout the convention. As with most rights documents, the UNCRC acknowledges that rights are not absolute and may be regulated by law for purposes of national security, public safety, public order, or the protection of the rights of others. The UNCRC also ac-

knowledges and accommodates cultural differences across the diverse world. Specific provisions discuss adoption, refugee situations, children with disabilities and special needs, health measures, social security measures, living conditions, education, minority rights, recreation, cultural identity, labor, illicit drugs, sexual exploitation, due process, juvenile corrections, and armed conflicts. The UNCRC is comprehensive in its approach to children's rights, incorporating civil and political rights as well as economic, social, and cultural rights, all within a human rights framework.

A very important feature of the UNCRC is the extent to which it emphasizes goals for nations to work toward in realizing children's rights. For example, article 28 declares that nations will "recognize the right of the child to education" but continues by urging states to work toward "achieving this right progressively and on the basis of equal opportunity." The rest of the article describes a "progressive" plan: first, universal, compulsory, free primary education; then "encourage the development" of various kinds of secondary education programs and aim to make them available and accessible to all; make higher education available to those who are capable; take measures to encourage school attendance and reduce drop-out rates. The child has a right to an education that contributes to "the development of the child's personality, talents and mental and physical abilities to their fullest potential." And the UNCRC calls for international cooperation to eliminate illiteracy and to assist developing nations.

Acknowledgment of children's rights as an essential aspect of the international human rights agenda has resulted in a number of important international initiatives. Since 1990 when the UNCRC entered into force as a result of its ratification by the required number of nations, activity in support of children's rights has heightened. Governments and nongovernmental organizations (NGOs) have developed policy statements, sponsored conferences, held hearings, and litigated legal issues related to children's rights. The World Summit for Children, attended by governmental officials from over eighty nations, produced the "World Declaration on the Survival, Protection, and Development of Children" in 1990, emphasizing the need to protect and care for the world's children. The following year the monitoring committee established by the UNCRC, the Committee on the Rights of the Child, held its first meeting

in Geneva and in 1993 it reviewed the first reports submitted by States Parties. In the meantime, the American Civil Liberties Union Children's Rights Project began to litigate cases on behalf of children served by social welfare agencies. To implement Article 21 of the UNCRC concerning intercountry adoption, the Hague Conference on Private International Law finalized a treaty in 1993, known as the Hague Convention on the Protection of Children and Cooperation in Respect of Intercountry Adoption, stipulating rules and procedures for the placement of children in foreign countries. In 1995, a coalition of children's rights and advocacy groups came together to form the European Children's Network to lobby for the inclusion of children's rights in the EU Treaty. The second World Congress Against the Sexual Exploitation of Children was held in Yokohama, Japan in 2001, organized in part by an NGO devoted to eliminating child prostitution in Asian tourism. In 2000, massive preparations began to launch a United Nations General Assembly Special Session on Children (UNGASS) for September 2001. Postponed due to the terrorist attacks of September 11 in the United States, the meeting eventually took place in May 2002 and produced an action plan titled *A World Fit for Children*, adopted by 180 nations (UN General Assembly 2002a). Significantly, the document resulted from the collaboration of governments, NGOs, and children and young people themselves. The twenty-one goals set out for the next decade focused on key areas of action: elimination of childhood poverty, quality education for all children, protection of children against abuse and exploitation, elimination of HIV/AIDS among children and their families, and environmental protection for present and future generations. The plan reiterated the need to "put children first" by making the best interests of the child a primary consideration in all actions related to them and to "listen to children and insure their participation."

Between the 1990 World Summit for Children and the 2002 UNGASS on Children the focus on children's rights in addition to children's needs heightened measurably. *A World Fit for Children* highlighted the importance of the UNCRC, recognized the progress that had been made in improving the material living conditions of many of the world's children, acknowledged the primary role of parents and families in the care of children, called upon the

entire global community to work toward creating a world fit for children, and reaffirmed the need to respect the human dignity of each child and to promote and protect the rights of each child (UN General Assembly 2002a). The document makes special mention of the rights of girls and indigenous children but does not neglect the special hazards facing boys. The document urges cooperation between many entities to achieve a world fit for children: parents and families, local governments, legislators, NGOs and community groups, corporations, religious institutions, mass media organizations, regional and international bodies, people who work with children, and of course, children themselves. While the document set specific targets and goals for achievement by the year 2015, three general goals stand out: providing children with the "best possible start in life," quality primary education, and the ability to develop individual capacities. Some of the specific goals included reductions in infant and children mortality, increases in childhood immunizations, expansion of early childhood care and education, elimination of gender disparities in education, increases in literacy, elimination of the worst forms of child labor exploitation, development of legal systems to protect children's rights in the justice system, and protection of children from armed conflict. Most of these goals were defined in terms of statistically specific targets.

Worldwide then the discourse of children's rights appears to have reached a crescendo, if the participation of over seven thousand people at the UNGASS on Children is any indication. Four hundred children attended the special session, while youth representatives from several countries addressed the General Assembly. Prominent figures such as Nelson Mandela, Carol Bellamy, and Bill Gates Jr. participated alongside hundreds of high-level government representatives. At the same time, the UNGASS underscored the lack of progress on the well being of children around the world since the adoption of the UNCRC. The thousands of pages of supporting and official documents generated before and after the special session provide volumes of information on the state of the world's children.

Although worldwide infant and child mortality have declined in recent decades, and all countries have been able to report national declines, still it is estimated that 10 million children die annually (about 30,000 children a day), most as a result of malnutri-

tion or preventable diseases such as measles or diarrheal dehydration. In the developed world, child mortality has dropped from 43 per 1,000 births in 1960 to 8 per 1,000 in 2002. In the developing world, the progress has not been as great, dropping from 224 per 1000 births in 1960 to 89 per 1,000 in 2002. Malnutrition afflicts 150 million children, while HIV/AIDS is spreading most rapidly among women and children. HIV/AIDS has left 13 million children orphaned. During the 1990s, over two million children died as a result of armed conflicts while many more were seriously injured. It has been estimated that there are more than 300,000 child soldiers at any one time, many recruited through force. Since one-third of annual births go undocumented, information about the age of child soldiers and child laborers is often hard to verify. Half of the world's refugees are children—about 20 million. Moreover, 120 million children do not attend school and the majority of these are girls, about 65 million worldwide. One-third of all children obtain less than five years of schooling, which is regarded as the minimum amount needed to acquire basic literacy.

Child labor poses especially difficult questions. The labor of children is often necessary and useful for millions of families around the world, especially in poor and rural communities. Nor is all child labor harmful or exploitative. Advocates of children's rights worldwide do not seek the complete elimination of child labor but rather emphasize the prohibition and elimination of the "worst forms" of child labor—defined by the UNCRC as "any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development." Child labor is highest among children who are not attending school.

One out of six children perform work that is considered damaging to their mental, physical, and emotional development. Most child laborers worldwide work in agriculture where they are exposed to dangerous chemical pesticides and fertilizers and must use dangerous equipment such as machetes. Still others work the streets of the cities running errands, hawking goods, or prostituting their bodies. Some domestic labor among children is a cover for child slavery and child trafficking. Girls make up the vast majority of domestic child workers. With so much of their work done in the privacy of homes, behind

closed doors, experts believe that they are at high risk for exploitation and the denial of rights. In some developing countries, child labor is on the rise even though a 2004 study of the economic costs and benefits of eliminating child labor suggests that the benefits will significantly outweigh the costs.

An indication of things to come may be found in India, the second most populous nation in the world, the world's largest democracy, the nation with the largest number of illiterates in the world and with a widely reported child labor problem. In 2002, India's parliament adopted the *86th Constitution Amendment Act* adding to the list of fundamental rights, the right to education. The Indian Constitution now affirms that all children have a right to eight years of free, compulsory, elementary education between the ages of six and fourteen. Since nearly every state in India already had a compulsory education act, the implications of this new amendment remain in how it is operationalized and what it means, practically and theoretically, to assert a right to education.

Kathleen Alaimo

CHILDREN'S RIGHTS IN THE UNITED STATES

Change has always characterized the place of children in the United States and this is certainly true in the contemporary world of rapid change. Ambivalence has always characterized the way in which adults in the United States think about children. For example, although the definition of the child as any human being under the age of eighteen years has simple appeal, it in fact obscures much. Many institutions and programs in the United States function in ways that depend on careful calibration of age grading. In some settings, it seems appropriate to extend the protections of childhood to those up to twenty-one years of age. In other situations, rights and responsibilities are recognized at much younger ages, such as fourteen or sixteen.

Concern about children and childhood as a matter of public policy has been evident in the United States since the early twentieth century. Beginning in 1909, and continuing nearly every decade since then,

the White House has sponsored conferences dealing with the conditions and needs of children. Academics, health and legal professionals, social workers, psychologists, educators, community leaders, and others participated in these gatherings. The first White House Conference on Children, chaired by President Theodore Roosevelt, led to the creation of a new federal agency, the Children's Bureau, which has since evolved into the cabinet-level Department of Health and Human Services. The 1919 conference, following the First World War, drew international participants and focused on child labor, maternal and infant health, and child protection. The 1930 conference, at the start of the Great Depression, drew over 1,200 participants and led to the formulation of a national "Children's Charter." This document was one of the first to recognize the "rights of the child as the first rights of citizenship." Pediatric care and labor protections received special attention as a result of the 1930 conference. By 1940, the White House Conference on Children (Story of the White House Conferences on Children and Youth 1967) focused on "how a democracy can best serve its children and how children can be helped to grow into the kind of citizens who will preserve democracy." The importance of developmental psychology was evident in the 1950 conference's emphasis on children's emotional and mental development. On the eve of the turbulent 1960s, the White House Conference on Children and Youth attracted eleven thousand people who devoted much time to discussions of juvenile delinquency, schooling problems, and drug use. The 1970 conference focused on racism, child abuse, and childcare among other issues and helped lead to the formation of a new cabinet-level Department of Education. The 1980 conference focused on families and children including the impact of divorce and mobility. President Jimmy Carter asked each state governor to appoint an official responsible for children's issues. The 1990s witnessed a proliferation of White House sponsored conferences on children, especially during the years of the Clinton administration.

Central to the discussion of children in the United States, especially in the last thirty years, is the relationship between children's needs and children's rights. The contemporary trend has been to emphasize children's rights, the notion that children have inalienable rights due them as human beings and under the

law. This has fundamentally shifted the discussion of children's place in the United States, even though the concerns may seem similar to those articulated in the early twentieth-century era of child-saving efforts, such as adequate health care or schooling. When children's needs are transformed into children's rights, the obligation to meet them is intensified.

The origins of this trend appear to coincide with the height of the civil rights and women's liberation movements of the 1960s. Indeed, *Brown et al. v. the Board of Education of Topeka et al.* (1954), a landmark case in the history of desegregation in the United States, suggests a nascent intersection of civil rights and children's rights. In overriding the infamous "separate but equal" doctrine of segregated public facilities, the Supreme Court argued that equal opportunity to education was a key to children's future success. The opening lines of the decision specifically identify "children"—"white and Negro"—as the focus of the issue. It was "Negro children" who were being denied equal protection under the Fourteenth Amendment.

In a pioneering article that first appeared in 1973 in the *Harvard Educational Review*, Hillary Rodham, of the newly established Children's Defense Fund, wrote, "The phrase 'children's rights' is a slogan in search of a definition. . . . Asserting that children are entitled to rights and enumerating their needs does not clarify the difficult issues surrounding children's legal status." Since that time, the discussion of children's rights in the United States has clarified much but the ongoing tension between needs and rights continues. It is the unique status of children as both dependent but also capable of evolving independence that contributes to so much of this tension. Moreover, the failure of both proponents and opponents of children's rights to fully appreciate the differences of age and capacity among children under age eighteen adds to the confusion.

The most notable impact of the contemporary children's rights movement in the United States is the attention it has forced policymakers, legislators, judges, journalists, academics, and the public to give to children and their place in American society. Academic disciplines not normally connected to the study of children have developed specialized fields of inquiry (the history of children, the sociology of children, children's law) with specialized journals, professional associations, research institutes, and

conferences. Studies of the impact of divorce and foster care have proliferated, with specialized legal advocates prepared to lobby for and protect the rights of children in divorce or foster care. Across the country, states and local governments have adopted official statements attesting to the rights of children in state care. The American Bar Association has a special division focused on children's rights and many law schools have centers or institutes specializing in children's legal status and rights. The National Association of Counsel for Children, founded in 1977, now has over two thousand members in all states and provides training and resources to those serving the legal needs of children and youth.

From the 1965 Head Start initiative to the 2001 *No Child Left Behind Act*, children have had a place on the national policy agenda. In addition to the White House Conferences, major pieces of federal legislation have been passed in the last forty years in response to demands for greater attention to the situation of children in the United States. Following the 1962 publication of "The Battered Child Syndrome" by Dr. C. Henry Kempe in the *Journal of the American Medical Association*, efforts were launched to develop effective child abuse reporting laws. In 1974, Congress passed the federal Child Abuse Prevention and Treatment Act (CAPTA) that provided states with funding to investigate and prevent child abuse if they adopted mandatory reporting laws. CAPTA included provisions for confidentiality, the appointment of guardians *ad litem* for children, persons appointed by the court to protect the best interests of the child, and the creation of a National Center on Child Abuse and Neglect. In 1978, the *Adoption Reform Act* was passed. In 1984 CAPTA was broadened to include more types of maltreatment. In 1980 Congress passed the *Adoption Assistance and Child Welfare Act* to address problems in the foster care system. In 1981 block grants to states were intended to improve child protective services. Congress passed the *Child Abuse Victims Rights Act* in 1986 and the *Victims of Child Abuse Act of 1990*. The *Adoption and Safe Families Act of 1997* included provisions for legal representation, state funding for child welfare, and state performance requirements.

Despite this activity at the national level, the relationship of the United States to the United Nations Convention on the Rights of the Child (UNCRC) is a troubled one. Although most nations of the world signed

the UNCRC within the first two years, the United States did not sign it until 1995. More important, the United States has not ratified the UNCRC through the process of Senate confirmation, thereby remaining one of only two nations in the world to not ratify the UNCRC. Reasons for the failure of the United States to ratify the convention are complex but include the historical resistance to international treaties that might constrain national sovereignty, the deep tradition of states' rights in the areas covered by the convention (such as education), and the belief that ratification would make little difference to practices and policies. The latter explanation is related to the fact that even when nations ratify the UNCRC they are permitted to take up to twelve exemptions thereby undercutting some of the impact of the convention. Nonetheless, ratification would cement the priority given to children's issues at the federal and state level and would propel new discussion of policies such as minimum wage, education, and health care. For example, the UNCRC calls on nations to address the economic and social rights of children "to the maximum extent of their available resources." According to the Children's Rights Division of Human Rights Watch there are two key areas in which the United States falls far short of the standards articulated in the UNCRC: juvenile justice conditions, especially the detention of juveniles in adult facilities and laws permitting the execution of mature minors in a number of states, and the handling of children by the Immigration and Naturalization Service. The symbolic value of ratification is not insignificant especially in light of the actual conditions of children in the United States today.

A statistical overview of some measures of child well being in the United States confirms that children's needs and rights have not been fully met. One in six children live in poverty. Poor children are more likely to be unhealthy, score poorly on standardized tests, or drop out of school. African American children make up the largest number of children living in poverty. One in eight children in the United States have no health insurance. Less than one-third of fourth graders read at grade level. One in ten teenagers (ages 16–19) is a high school dropout. Despite the fact that there are nearly 40 million children between the ages of 5 and 14, the United States does not have a comprehensive plan for "nonschool programs" that cover the times of day and times of year when children are not in school. Rates of juvenile delinquency triple during the afterschool hours. Eight children a day die

from gunfire in the United States. Children in foster care, an ever-growing number, stay an average of 2.5 years, move to a new home four times a year, and have ten different caseworkers during their stay. The precise incidence of child maltreatment (abuse and neglect) nationally is difficult to ascertain but estimates suggest that there are one million substantiated cases of child abuse and neglect in the United States each year with at least twice that many number of reported cases. The number of children reported each year is about 44 per 1,000; the largest number of these reports come from educators. Exploitative child labor, while not a problem of the magnitude found in India or parts of Africa, exists in the United States as well. The majority of underage workers in the United States can be found working in agriculture, the second most dangerous occupation after mining. Estimates are unreliable but some point to as many as 800,000 child farm workers in the United States, working twelve or more hours per day for as little as \$2.00 per hour. Significantly, child labor in other sectors is strictly regulated. Finally, an estimated five thousand "unaccompanied minors" a year end up in the custody of the Immigration and Naturalization Service where they are frequently detained in juvenile corrections facilities rather than in child welfare or protection services.

Welfare reform in the United States, launched by the 1996 *Personal Responsibility and Work Opportunity Reconciliation Act*, transformed welfare programs into employment programs for the poor, especially single mothers, and eliminated the old Aid to Families with Dependent Children program. The initial results appeared promising but promotion of children's well being requires resources independent of moving mothers into jobs. For example, quality childcare and after-school programs not only help low-income working mothers but also improve children's opportunities to develop. Also, it is not yet clear that reducing dependence on welfare translates into a reduction in child poverty. In 1997, the Department of Education established a grant program to fund 21st Century Community Learning Centers, which provides substantial funding for school-based afterschool programs for children and community members. An ongoing effort to improve the situation of children across the United States in the specific area of education is the *No Child Left Behind* initiative launched in 2001. Its aim, to improve teaching and learning in all the nation's public schools by raising standards and making schools

accountable in meeting them, is heavily dependent on federal funding, which has been decreasing. At the state level, reconsideration of the death penalty for mature minors who commit capital crimes is taking place from New Hampshire to Florida to Texas. Still, other measures to get tough on juvenile crime continue to appear on ballot referenda and on legislative agendas, despite a sharp decline in youth violence. Recently, the United States agreed to an optional protocol of the UNCRC that prohibits the use of soldiers less than eighteen years of age in combat. Early in the twentieth century, the United States Children's Bureau held a prominent place in the advocacy for children's protection rights. At the start of the twenty-first century, there is no equivalent agency. This survey of government efforts aimed at children suggests a mixed picture when it comes to assessing the realization of children's rights in the United States.

Kathleen Alaimo

CURRENT DEVELOPMENTS IN THE RIGHTS OF THE CHILD

Today, the rights of the child is still likely to generate heated discussion among experts, politicians, parents, children, and the public at large. Nevertheless, the issue is increasingly regarded as a legitimate one, worthy of serious discussion rather than a novel, silly, or radical idea. The idea that children have rights as members of the human family and that these rights can be identified and ought to be respected has become a more widely accepted view in the twenty-first century. Debate continues over how to define the scope of children's rights and the means of implementing rights for a population group whose age extends from birth to eighteen years old. The United Nations Convention on the Rights of the Child (UNCRC) has contributed not only to the codification of children's rights but also to a global consensus about the legitimacy of that code. Even the United States, which has not formally ratified the UNCRC, conducts much of its legal, legislative, and policy business regarding children on the basis of the ideas and goals set forth in the convention. Today, the arena of children's rights is more active than ever before

and there are several distinctive features to these contemporary developments.

First, the efforts to implement the provisions of the UNCRC have resulted in the development of both international and national monitoring bodies whose work produces voluminous amounts of information about the real conditions of real children around the world. This information provides the basis for discussion and evaluation and goal setting among governmental authorities as well as in civil society. Articles 42 through 45 of the UNCRC establish institutions and processes to examine "the progress made by States Parties in achieving the realization of the obligations in the present Convention." An elected Committee on the Rights of the Child, composed of experts with "recognized competence" and supported by the United Nations, is charged with receiving and evaluating the reports of States Parties, conducting hearings about the reports, soliciting further information from other informed bodies, and making recommendations for future progress. In practice, this monitoring exercise has led to the expansion of organizations (governmental and non-governmental) devoted to monitoring, advocacy, or service in the name of children's rights. Indeed non-governmental organizations (NGOs) devoted to children's rights around the world number in the thousands. In the United States, every profession whose work touches on children has created associations to develop and monitor practices acknowledging and protecting children's rights. The result of all this monitoring and reporting on the international, national, and local levels by governments and civil organizations is to create a comprehensive body of knowledge and information about children, their living conditions, and the extent to which they are treated with respect. The very existence of this body of knowledge and information contributes awareness of the rights of the child.

Second is the effort to promote the "mainstreaming" of children's rights. Mainstreaming refers to the ways in which children's rights issues are incorporated into not only the work of child-focused bodies such as UNICEF or the International Catholic Child Bureau but also into the work of human rights groups, government agencies, research communities, business corporations, schools, judicial institutions, legislative bodies, and other entities. Mainstreaming children's rights means moving the

rights of the child into the center of policymaking, budget decisions, research investigations, community development projects, and legal decisions. Evidence that the mainstreaming of children's rights is moving forward can be found in many places. Human rights groups such as Amnesty International, Human Rights Watch, and the International Labour Organization have special offices devoted to children's rights issues. In the United States the Food Research and Action Center sponsors the Community Childhood Hunger Identification Project while the American Bar Association sponsors several offices that work on children's legal issues. When the United Nations Security Council approved three resolutions (nos. 1261, 1314, and 1379) regarding children and armed conflict it linked its primary concern with international security to the issue of children's rights. UN peacekeeping missions now routinely include child protection advisors. And the UN High Commission for Refugees now pays closer and more specific attention to children. The inclusion of specific provisions for the education of children and young people in programs to control and reduce HIV/AIDS is yet another example of mainstreaming children's rights to health and information. Even international corporations have felt pressure to consider the human rights implications of their business practices, especially regarding child labor violations. Civil society, through shareholders, the media, and NGOs, have brought the issue into boardrooms. In 2002, the UNCRC Committee on the Rights of the Child devoted its annual general discussion conference to the role of the private sector in implementing children's rights. A woman-owned carpet manufacturing company in Nepal recently launched a program known as RUGMARK International to bring together carpet makers, exporters, importers, and NGOs in an effort to end child labor exploitation in the carpet industry. Incorporating children's rights in sustainable development plans is another aspect of mainstreaming. Recently, adolescent girls in Bangladesh, normally secluded at home until marriage, worked with community leaders on a water and sanitation management plan. At the highest levels of government, efforts have been made to bring children's rights issues into the mainstream of decisionmaking. The most notable effort is Norway's Office of Ombudsman for Children, the model for such government positions. The role of this type of

government office is to coordinate, at the highest level, programs that serve children, to integrate children's needs and rights into all aspects of government work, and to collaborate with other levels of government as well as nongovernmental organizations in improving the quality of life for children. In 2002, human rights lawyer Cherie Booth (spouse of British Prime Minister Tony Blair) called for the creation of such a post in the United Kingdom, arguing that children's rights must move up the government's agenda (Booth 2002). According to Marta Santos Pais, director of UNICEF'S Innocenti Research Centre in Florence, Italy, mainstreaming children's rights requires moving children's issues from the margins to the center at all levels of decisionmaking: "Only by bridging the gap between a commitment to the rights of the child and its translation into tangible policies and practices will we be successful in moving the child rights agenda forward" (Pais 2002, 12).

Third is the increasingly visible and effective role of experts in the promotion of children's rights. Universities and research institutes have played a significant role in this development. College courses, degree programs, conferences and workshops, journals and working papers, sponsored research, and expert testimony are all ways in which academic experts have contributed to the discussion of children's rights in the United States and throughout the world. Children's studies, a relatively new interdisciplinary field, is following in the footsteps of women's studies programs by bringing the study of children into the center of academic life. In the United States, the American Psychological Association has established a Consortium on Children, Families, and the Law drawn from research centers around the country that offers an annual series of expert briefings for congressional staff. During the 1990s, the consortium sponsored dozens of briefings on topics related to child and family policy including foster care reform, legal requirements for parent and child involvement in special education planning, children and violence, international law and children, and issues in juvenile delinquency. Although the direct influence of these briefings on legislative outcomes is hard to measure, there seems little doubt that "knowledge creep" has resulted. The briefings attracted increasingly large audiences with more and more representatives of the senior congressional staffs. Scholars who presented

at the briefings have been cited in the reports of congressional committees and have served on advisory bodies for congressional committees.

Fourth, and perhaps most significant, is the development of participation rights. Indeed, if it is recognized that children's rights have a long history in terms of rights to care and protection, then what is really new for the twenty-first century is the growing emphasis on and realization of the participation rights of children and young people. The UNCRC not only calls for consideration of the child's best interest but also demands that children be given a voice—not only through adults but in fact a voice of their own. Article 12 states that children have the right to express their views freely in matters that affect them and that these views must be given due consideration. In addition, the UNCRC specifically calls for the inclusion of children's voices in "any judicial and administrative proceedings affecting the child." More broadly, Article 13 states a right to free expression and access to information and Article 15 states a right to association. All these articles are shaped by the notion of the evolving capacities of children based on age and maturity.

Two contemporary outcomes have resulted from the development of participation rights. One is the flowering of organizations run by and for children and young people, as well as the inclusion of children in adult-run organizations. The Internet has facilitated many of these efforts, but they can also be found in places where information technology is unknown. Countless examples demonstrate increasing visibility and audibility of children. At the 2002 UNGASS on Children hundreds of children participated and delivered a message entitled "A World Fit for Us" (UN General Assembly 2002a). In India, a working children's union called Bhima Sangha brings young child laborers together to demand better conditions

and wages and to fight against child marriages. In Peru, *municipios escolares* are children's councils based in public schools which have now become mandatory; they focus on children's rights issues and are recognized by local authorities such as the police and churches. The second outcome resulting from the growth of participation rights is the development of processes and structures to foster participation and shared decisionmaking not only in legal situations but also in all aspects of daily life. This latter phenomenon has the potential to revolutionize the decisionmaking process in schools, custody hearings, discipline proceedings, doctors offices, town planning meetings, recreational facilities, state homes, and families. It has the potential to lead to a more full realization of democracy as children learn how to participate in situations that involve making choices and weighing competing interests. The most significant aspect of the shared-decisionmaking model in fostering children's rights is that it does not emphasize conflict and antagonism, say between children's rights and parent's rights, but rather encourages collaboration and resolution. If the heart of children's rights is the idea that children are to be taken seriously, treated with respect, and recognized as possessing inherent human dignity, then the effort to promote the participation of children in ways in which adults and children collaborate can be a more effective means to realizing the rights of the child. Since participation does not necessarily mean self-determination, the model of shared decisionmaking accommodates the process of learning how to make decisions that in fact have consequences. The aim of the UNCRC's call for the child's right to participate is to prepare children to function as useful members of their societies, and to prepare them in a developmentally sound fashion.

Kathleen Alaimo

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MORAL EDUCATION

In one form or another, moral education has always been a part of American schooling. This chapter will present a brief history of moral education followed by an in-depth look at the major contemporary approaches to moral education: Values Clarification, Cognitive-Developmental Moral Education, and Character Education. First, however, it will address some definitional issues.

DEFINITION

There is no settled definition for the phrase moral education; it can mean a number of things. For example, it could mean studying morality from a philosophical standpoint. On the other hand, it could mean instruction aimed at shaping or influencing the moral thinking or behavior of students.

Moral education can also be direct or indirect, explicit or implicit. Explicit moral education refers to instruction that is openly and directly part of the curriculum. Implicit moral education is that presumed to occur as an unofficial consequence of how schools are organized, as a result of the rules and statuses that govern how persons are to behave in the institution.

Implicit moral education has been called the unstudied curriculum or the hidden curriculum. Robert Dreeben has examined the structure of schooling and speculates that it promotes a variety of normative outcomes appropriate for our society. As one example, unlike families, schooling teaches children to accept being treated as categories such as third graders and the like. Being treated as members of a category is necessary for a functional society. We cannot expect all of our relationships with others to be intimate. We must deal with a limited range of others' selves. We do not expect to have deep knowledge of an individual bank teller, for example. We expect them to behave toward us within a re-

stricted range of conduct as we, as customers, do with them. Dreeben's speculation is that the structure of schooling contributes, unofficially, to citizens learning appropriate ways to relate to one another (Dreeben 1968).

The presumed outcomes of the hidden curriculum are not necessarily positive. Grouping students according to their abilities is officially intended to make instruction more efficient. Slower learners do not hold brighter students back. In spite of this explicit intent, Reba Page's research, for example, shows negative psychological effects on students, especially those in the lower tracks (Page 1991).

This chapter will address only explicit or direct moral education. It defines moral education as a general category of instruction that encompasses a variety of approaches. What they have in common is that they all intend to influence the values of students. They directly engage students in examining values and how they should relate to behavior. All forms of direct moral education assume that young people will not automatically develop desirably; moral education is intended to get them to think and behave in ways deemed appropriate by the moral educators.

HISTORICAL BACKGROUND

In colonial times, moral education typically was associated with some form of Protestant religious education. The famed *New England Primer* wove religious concepts, prayers, and doctrine into grammar lessons (Ford 1962). In learning the alphabet, for example, students recited "A In Adam's Fall We sinned all," and "C Christ crucify'd For sinners dy'd."

The connection of religious education to moral education has persisted throughout United States history. At the advent of public schooling in the first half of the nineteenth century, religious instruction was part of the curriculum. The foremost proponent of public schools,

Horace Mann of Massachusetts, believed students should read the Protestant Bible in school.

In 1836, McGuffey's readers were first published (McGuffey 1989). These textbooks included moral instruction. Children were encouraged to be virtuous and reverent. These texts were hugely popular. Well over 120 million copies were sold.

To the extent that religion was involved in the public school curriculum, it was Protestant. Some form of Protestantism was the dominant religion in the early days of the United States. This changed when large numbers of immigrants, especially Irish, began to come to the United States. The Irish immigrants were Catholic. Catholic parents bristled when they discovered that their children were exposed to the Protestant Bible and other features of Protestantism in the schools. In some cities Catholics created their own private schools.

By the turn of the twentieth century, religious-based moral education was beginning to fade from public schools. Religious moral education did not disappear, but it was no longer as widely practiced in public schools. Massive immigration and increasing religious diversity in the public schools contributed to the rise of secular forms of moral education.

The major form of secular moral education in the early decades of the century was called character education. The general aim of character education was to get young people to hold specific values such as honesty, courteousness, patriotism, and other virtues often tied to notions of good citizenship rather than religiosity.

Character education was endorsed and advocated widely. For example, in 1905, a resolution of the National Education Association said that building character was the central aim of schooling. Scores of articles promoted character education and described schooling practices that presumably stimulated the development of good character. Among them were homerooms, extracurricular activities, and giving grades for citizenship.

Research on the effectiveness of character education was mixed. Some studies reported positive results, others not. Today the best known of these studies is that of Hugh Hartshorne, Mark May, and their associates. The Character Education Inquiry was a large-scale five-year study. The major finding of the study was that character education did not have a consistent effect on students' moral behavior. Be-

havior appeared to be influenced more by situational factors than students' presumed character.

Character education began to drop from prominence around the time of World War II. Some of its aforementioned practices continue to the present day. It is unlikely, however, that these activities are currently intended to promote good character as was their intent when instituted.

In the latter half of the twentieth century, three forms of explicit moral education emerged. The first was Values Clarification, followed by Cognitive-Developmental Moral Education, and most recently, new approaches to Character Education.

Alan Lockwood

VALUES CLARIFICATION

In 1966, Louis Rath, Merrill Harmin, and Sidney Simon published *Values and Teaching*. This book set out the theory and practice of the approach to moral education they called Values Clarification. The book proved to be highly influential and Values Clarification came to be a widely employed form of moral education in United States public schools.

Values Clarification contends that contemporary young people are confused about values. The authors believe that institutions such as the family, religion, and the state no longer influence people's values development as they presumably did in some distant past. Young people get conflicting messages about what is right and worthwhile from the media, their peers, and other sources.

According to the founders of Values Clarification, values confusion leads to undesirable outcomes. Among these outcomes are apathy, flightiness, inconsistency, extreme uncertainty, overconformity, and overdissention. To address these problems, students must be clear about what they truly value. The methods of Values Clarification are designed to help young people determine what is important and worthwhile to them.

The methods of Values Clarification stem from a particular definition of value. For something to be a value it must meet seven criteria. It must be chosen freely; chosen from alternatives; the consequences of each alternative must be assessed; it must be prized;

it must be publicly affirmed; it must guide behavior; and, it must repeatedly guide behavior.

All seven criteria must be met for something to reach the status of a value. Values Clarification does not tell students what to value. It teaches them a process through which they can determine for themselves what they value.

In numerous publications, Values Clarification provides hundreds of classroom activities called strategies. One strategy is entitled *Twenty Things You Love To Do*. Students make a list of twenty things they love to do. Then each item is coded in a number of ways. For example, a dollar sign is placed next to those that cost more than an identified amount of money; an A next to those one prefers to do alone; a P next to those one prefers to do with people; an N5 next to those that would not have been on the list five years ago. Students then rank the items in preference order from one to five and indicate when each action was last taken. Students may then discuss their items and why they enjoy doing them.

The teacher employing Values Clarification is to exhibit certain characteristics. First, the teacher must be nonjudgmental. The teacher is to be nurturing, accepting, encouraging, and not critical of the values and value judgments expressed by students. The teacher also teaches the students to behave in this way to one another.

Although popular among many, Values Clarification faced a number of criticisms. Two of the prominent criticisms were that it could promote ethical relativism and that many of the strategies could jeopardize the privacy rights of students and parents.

Ethical relativism is the doctrine that contends that moral judgments cannot be proven to be right or wrong or better or worse. Consequently, all moral judgments are equal.

There are a number of reasons that some scholars claimed that Values Clarification embodied ethical relativism. Some of the strategies mix trivial value choices (favorite TV shows) with profound moral value choices (one's position on capital punishment). The seven criteria of value and the process for valuing do not ask students to defend their positions beyond their personal preferences; personal preferences are fine for trivial value decisions but moral judgments require a more thoughtful and elaborate defense. There has also

been concern about the emphasis placed on not making judgments of others' views, which can lead to the impression that all opinions are equally valid in matters of morality.

A serious concern about the use of Values Clarification's strategies and advice to teachers is the potential for the violation of students' and parents' rights to privacy. For example, students may be asked to complete sentence stems such as: *Secretly I wish . . .*, *My parents are usually . . .*, and, *When I'm at home alone I . . .*. Another strategy asks students to draw a big cartoon outline of their house and add stick figures of the people who live in the house. They then are asked to write in cartoon balloons what the people are saying to one another. Teachers are encouraged to promote students' self-disclosures.

The threat to students' and parents' rights to privacy exists because these strategies are used in school settings. Students are required by law to be in school. Teachers have substantial authority over students. The disclosures required by the strategies are done in front of other students. These conditions make it likely that students will feel compelled to participate in the activities, even if they involve public disclosure of private information.

Alan Lockwood

COGNITIVE-DEVELOPMENTAL MORAL EDUCATION

The second major form of moral education to emerge in the latter half of the twentieth century was Cognitive-Developmental. It was based on the research on moral reasoning of Lawrence Kohlberg (Kohlberg 1981). Kohlberg's research extended that of Swiss psychologist Jean Piaget. Piaget had shown that adult moral thinking differed significantly from that of children. He called these stages of moral development (Piaget 1965).

Piaget had identified two stages of moral development. Kohlberg's research initially identified six stages. Kohlberg engaged in an extensive longitudinal study of approximately fifty boys, following them from childhood to early adulthood.

Periodically he would interview his subjects, ask-

ing them questions related to what he called moral dilemmas. A moral dilemma is a story, true or fictional, in which basic moral values come into conflict and difficult decisions have to be made.

One of his moral dilemmas is called the Heinz dilemma. In this dilemma the values of life and property come into conflict. The Heinz dilemma tells the story of a man whose wife is dying of cancer. The druggist in town has a drug that may cure his wife but he is charging much more for the drug than Heinz can afford. Heinz tries to persuade the druggist to charge less and he also tries to raise money from friends. Neither of these efforts works. Heinz decides to break into the store and steal the drug. A number of questions about this story are then asked of the subjects. One is: Was Heinz right in stealing the drug? Why or why not?

Kohlberg was not interested in whether his subjects thought a particular action morally right or wrong. Instead he sought to know how the subject came to his conclusions, that is, what was the nature of the reasoning about right and wrong that the subject brought to the dilemma.

Over the course of his initial study, Kohlberg found that his subjects' reasoning changed over time, passing through six stages of moral thinking. Briefly, (much more detail can be found in Kohlberg's writings), the stages were as follows:

Stage One: The Punishment and Obedience Orientation. Judgments of right and wrong are based on the physical consequences of an action, deference to powerful authority, and avoidance of punishment.

Stage Two: The Instrumental Orientation. Judgments of right and wrong are largely based on a determination of what satisfies the actor's needs.

Stage Three: Interpersonal Conformity. Judgments of rightness are based on that which pleases others and is approved by them.

Stage Four: The Law and Order Orientation. Judgments of rightness based on fixed rules and maintenance of social order.

Stage Five: The Social Contract Orientation. Judgments of rightness based on notions of human rights and standards agreed upon by due process.

Stage Six: The Universal Principles Orientation. Judgments of rightness based on general principles of justice that should hold in all situations.

Each stage captures a consistent moral point of view. The stages have certain properties and characteristics. Development occurs in an invariant sequence. That is, there is no skipping of a stage. A person reasoning predominantly at stage four has moved through stages one, two, and three in that order. Subsequent research found the same stage development in females as well as males, and across cultures.

Progression to the highest stage is not inevitable. Very few people attain the highest stages. Further research found that the majority of adults reason at predominantly stages three and four.

Another property of the stages concerns preference and rejection. Researchers discovered that, when presented with a range of reasoning, subjects preferred reasoning at a stage above their predominate stage of reasoning and rejected reasoning at stages below their predominate stage.

When asked to paraphrase the other reasoning, subjects had difficulty doing so with the higher stage reasoning but were very accurate with the lower stage reasoning. Therefore, while subjects preferred the higher stage reasoning, they had difficulty comprehending it. Kohlberg suggested that people have an intuitive preference for higher stage reasoning.

From a philosophical point of view, Kohlberg argued that the highest stages are morally better than lower stages. The superiority of the highest stages is not simply because they emerge later. Rather, their superiority is argued for on the grounds of ethical theory. Among other things, the highest stages produce more consistent judgments that defend and protect human rights.

Some researchers wondered if stage progression could be advanced through educational intervention. That is, could progression be speeded up? Moshe Blatt and Lawrence Kohlberg tested this proposition (1975). Students in the treatment group participated in guided group discussions about various moral dilemmas. The control group received regular instruction. At the conclusion of the experiment, those students who discussed dilemmas advanced in their stage of moral reasoning more than those who had received regular instruction. The

advantage for the treatment group averaged about half a stage.

The belief that the highest stages of moral reasoning were superior to the lower stages, coupled with evidence that stage development could be influenced by instruction, became the basis for Cognitive-Developmental Moral Education.

Practical applications of Cognitive-Developmental Moral Education followed this seminal research. Curricula were developed which involved students in the discussion of moral dilemmas. For example, Alan L. Lockwood and David E. Harris (1985) created factual historical dilemmas for use in secondary U.S. History courses.

Later, Kohlberg became involved in what became known as Just Community Schools. These schools were democratically organized and students had substantial power to make decisions on how the school should be governed. Their discussion of what rules should be created and how they should be enforced engaged them in real life moral issues (Power, Higgins, and Kohlberg 1989).

THE FUTURE OF MORAL EDUCATION

It is, of course, difficult to predict the future of moral education. As noted at the outset, some form of moral education has always been a part of public schooling. Given that, it is likely that some form of moral education will be part of schooling in the new century. What form or forms it will take is unknowable at this time.

There is reason to believe that moral education, in whatever form, will be conducted predominately at the elementary school level. Elementary teachers often see part of their role as helping children learn to behave properly. For some this is as important as the teaching of reading, mathematics, and other subjects. High school teachers, on the other hand, are less likely to view moral instruction as part of their mission. High school teachers are educated, for the most part, in the subjects they teach. Their training, certification, and mandate from their schools do not explicitly involve moral education. Unless this changes, moral education is unlikely to become an integral part of higher-level public schooling.

Alan Lockwood

CHARACTER EDUCATION

Character education is an enterprise that defies precise definition. This entry will trace the development of character education, focusing primarily on the twentieth century, and develop a conception based on common themes apparent in the historical record. There have been two periods in the twentieth century in which character education has been significantly emphasized in schools. The first of these periods, from the turn of the century until about 1940, will be referred to as the early character education movement. The second period, from approximately 1980 until the present, will be referred to as the recent character education movement.

HISTORICAL ROOTS

Although character education is largely a twentieth-century American phenomenon, its roots go back as far as the seventeenth-century European Enlightenment. Prior to the Enlightenment it was widely understood that morals were to be taught by the church. The intellectual revolution of the Enlightenment resulted in the secular gradually replacing the supernatural in the general worldview. This secularization also changed the basis for morality and moral education. The post-Enlightenment worldview accepted the perspective that the universe and human life can be understood through the use of reason alone, and humans can be improved through secular education. When the eighteenth- and nineteenth-century shifts in power from the church and the monarchy to democratic republics transpired, the maintenance of social cohesion required that a new basis for morality, as well as a new means of teaching it, had to be found.

In Europe, two countries in particular, England and France, preceded America in the effort to develop a secular approach to moral education. In England, the Moral Instruction League, formed in 1897, was made up of many of the leading educational thinkers and philosophers. The league's views on secular moral education to strengthen the character of youth were incorporated into the Education Codes of 1904 and 1905. In France, where educators wanted to free themselves not only from the old regime, but also the church, explicit programs in secular ethical instruction in the schools of the Third Republic were

referred to as *morale laïque* (Stock-Morton 1988). Prior to the creation of the Third Republic in 1870, moral instruction had largely been religious in nature. The American effort to find a secular basis for moral education followed European efforts and took on a uniquely American character.

THE EARLY CHARACTER EDUCATION MOVEMENT IN AMERICA

This evolution from a religion-based moral education to a secular moral education, so important to the emerging democratic nation states, shaped the rise of the early character education movement in America. In the late eighteenth century Thomas Jefferson argued for the need for a public education system that infused virtue into the masses. He realized that with no state church and no monarchy, a virtuous American government would have to be based on a virtuous people. Many of the leaders of this generation—George Washington, Benjamin Rush, Benjamin Franklin, and Noah Webster—also saw the need for education to unify an increasingly ethnically and socially diverse population. Homogeneity was an explicit goal for education in this era. Thomas Jefferson, for example, in an 1875 letter to John Bannister, argued for an educational system that would produce men whose “manners, morals, and habits are perfectly homogeneous with those of the country.” Horace Mann, the father of the Common School Movement, also believed a strong moral emphasis was necessary to produce a stable and strong democracy.

Benjamin Franklin noted the need for a “Public Religion.” Franklin believed that man could be morally perfected and that a reliance on traditional religion was insufficient. His attempt to achieve general moral perfection foreshadowed one aspect of later approaches to character education by enumerating a list of virtues. The search for a secular morality, and a means of delivering it outside of the context of religious education, accelerated and became a central focus of American educators at the turn of the twentieth century. Due to dramatic increases in urbanization, industrialization, immigration, and shifting cultural values in America in the thirty years following the Civil War, a prevailing national unease resulted in a heightened concern about social instability and the character of youth.

The United States was a more heterogeneous and more religious country than European nations at the turn of the twentieth century. As a result, the secularization of moral education in the United States took on a distinctive character. It was religious heterogeneity more than a desire to put forth a secular moral education that forced American educators to separate religion from education. This separation was not something that occurred easily or quickly. For example, even though forty-one out of forty-six states had effectively legislated sectarian influences out of public schools by the turn of the twentieth century, nearly all of the early character educators in America were active members of the Religious Education Association (REA) and frequent contributors to the REA journal, *Religious Education*.

A significant benchmark for the origin of the early character education movement was a resolution adopted at the 1905 annual meeting of the National Education Association where the NEA recorded its approval “of the increasing appreciation among educators of the fact that the building of character is the real aim of the schools and the ultimate reason for the expenditure of millions for their maintenance.” This statement was widely cited by the educational establishment as legitimating character education in schools. It was in the twenties that character education gradually began to replace moral education as the preferred name for the movement. For example, Milton Fairchild, one of the more influential founders of the character education movement, in 1922 renamed his National Institution for Moral Instruction (founded in 1911), the Character Education Institution.

This shift in nomenclature occurred in part to separate the movement from its past of religious-based moral instruction. This separation, however, was never fully completed in this era. For example, in 1925 the Moral Code for Youth, a classroom poster widely disseminated by *Colliers Magazine*, listed as its last principle “Faith and Responsibility” and included the following injunction: “I must do all these things because I am accountable to God and humanity for how I live . . .” Even though educators in the 1920s and 1930s knew that they could not teach a religion-based character education in schools, a more complete break with religion as a basis for character education was slow in coming and was not apparent until after World War II.

THE PEDAGOGY DEBATE

The debate over the methods to be used to foster character in American schools remained focused on two approaches throughout the first half of the twentieth century. At the turn of the century the dominant pedagogy in America's schools involved recitation, memorization, and drill. At the same time, the influence of Rousseau, Herbart, Pestalozzi, Froebel, and Dewey caused many educators to reject more direct and traditional approaches and give greater attention to the interests and needs of the child. Education was becoming more child-centered and activity based. These two approaches (direct and indirect/teacher-centered and student-centered) have provided the language and defined the framework for discussions of how to teach character in America's schools for the entire length of the twentieth century.

Generally, direct methods accord a more central role to teachers and their individual determination of the content of the lesson, teacher planning of the lesson, and the incorporation of the lessons into the formal curriculum (e.g., history, literature, civics, etc.). Indirect methods tend to be more incidental and arise as the occasion dictates. Indirect lessons are based on student experiences, and preaching and moralizing on the part of the teacher are to be avoided. Students are asked to find the moral lesson for themselves, and to form their own plans and solve their own problems. Many reformers saw the direct approach as old and traditional, and the child-centered approaches as new and innovative. Surveys of the practice of character education in schools conducted in the 1920s and 1930s reveal that most schools used a blended approach with a slight preference favoring direct approaches.

THE RECENT CHARACTER EDUCATION MOVEMENT

In the period between America's entry into World War II and the mid 1970s, the phrase *character education* was seldom used to describe any activity of schools. Educational historians have offered a number of interpretations regarding the reasons for the decline of character education. Edward McClellan (1999) suggests that character education in this period declined due to an increasing emphasis on the cognitive dimensions of education and a focus on

anti-communism. These trends directed educators' attention away from character education initiatives. Sherry Field (1996) argues that character education became subsumed into social studies education as America became more concerned about patriotism and citizenship in the unsettled times of the forties and the ensuing Cold War era. James Arthur (2003) suggests that character training had become associated with the youth programs of totalitarian regimes in Europe in this era and as a result fell into disfavor. The post-World War II national preoccupation with winning the Cold War effectively pushed character education to the background.

Accompanying the turbulent Cultural Revolution of the 1960s and 1970s, two approaches to moral/values education achieved prominence. In 1966 the book *Values and Teaching* by Louis Rath, Merrill Harmin and Sidney Simon *appeared* advocating Values Clarification. Also in 1966, Lawrence Kohlberg presented the implications of the cognitive developmental approach to moral reasoning for moral education for the first time in an article in the journal *School Review*. Both of these approaches represented a sharp break from the direct (teacher-centered) approach to character education, and both took a negative view of the traditional "bag of virtues" approach that enumerated a list of virtues to be inculcated in children by teachers. Instead, both of these approaches argued that it is each individual's responsibility to decide what their values should be. In both approaches indoctrination and tradition is seen as anathema. Parents or community as a source for the development of personal values is to be avoided, and teachers and schools were to serve as facilitators only in this moral/values education process. Both approaches were attuned to the individualistic and anti-authoritarian tenor of the times.

These two approaches met different fates. The Values Clarification approach, although achieving wide use in schools, after incisive critiques by Alan Lockwood was unable to shake the charge of moral relativism and fell into disfavor (see Lockwood 1975, 1977). The cognitive development approach of Lawrence Kohlberg never did achieve a strong foothold in schools due to the difficulty many teachers had with understanding and mastering the teaching skills entailed.

In the late 1970s and 1980s character education emerged again. The national reaction against the

perceived excesses of the Cultural Revolution of the 1960s, apparent in a newfound permissive morality and selfishness, was accompanied by a renewed concern for the well being of youth. The more conservative mood of the nation was embodied in the election of President Ronald Reagan in 1980. The emerging consensus was that something needed to be done about the increasing social instability and the declining well being of youth. These concerns received national legitimacy in the 1987 Conference on Moral and Character Education, organized by William Bennett, then-Secretary of Education. Gradually, once again, character education became the preferred phrase to describe the school's response to the nation's concern about youth conduct. The phrase *character education*, as in the early decades of the twentieth century was once again used to separate the new movement from the earlier moral and values approaches.

At the turn of the twenty-first century the debate over the proper methods to use in character education continues. Ed Wynne, an influential early proponent of the current character education movement defined character education as the transmission of moral values to succeeding generations (Wynne 1985/1986). From Wynne's perspective, moral values are the vital common beliefs that shape human relations in each culture. Ed Wynne, and his associate Jack Benninga (Benninga and Wynne 1988), take a decidedly behavioral and even indoctrinative view on the pedagogy of character education. They propose that teachers (1) identify virtue, (2) establish virtues as goals for students, (3) provide opportunity for students to practice virtues, (4) praise students when behavior is displayed, (5) identify undesirable traits and prohibit them, and (6) use schools' formal curriculum and ceremonies to support such activities. They also emphasize the importance of hiring, training, and retraining staff who support pro-character policies. Wynne argues that on the whole, school is, and must be, inherently indoctrinative. The only significant question for Ed Wynne was: Will the indoctrination be overt or covert, and what will be indoctrinated? (Wynne 1985/1986)

Many, however, who share the concern of character educators about the well being of youth, take a different view on pedagogy. Three influential leaders of the current character education movement, in a 2001 editorial in the national education weekly

Education Week, criticize four varieties of contemporary teacher-centered character education programs (Schapps, Schaffer, and McDonnell 2001). They characterize these four approaches as cheerleading, praise and reward, define and drill, and forced formality. These three leaders argue that these teacher-centered and direct approaches will not yield deep and enduring effects on character. Instead they argue that the approach must be child-centered, focused on the needs of children and tied to the development of caring and just communities in schools.

Alfie Kohn, a leading critic of the teacher-centered traditional form of character education argues that instead of using teacher-centered approaches (such as "compel and tell") that children must be invited to, approaches should be used that allow them to reflect on complex issues, interpret those issues in light of their own experiences and questions, figure out for themselves what kind of persons they want to be and which traditions are worth keeping, and to decide how to proceed when two basic values are in conflict (Kohn 1997). Kohn's views echo those of proponents of the values clarification and cognitive developmental approaches of the 1970s. From this perspective moral education is synonymous with decisionmaking.

Thomas Lickona (1991, 2004), an influential leader in the current character education movement, best captures its spirit and practice. He defines character education as the intentional proactive effort to develop good character. From Lickona's perspective the qualities of good character consist of virtues. Virtues, in turn, are objectively good human qualities. According to Lickona, the virtues provide the moral content that defines moral character and moral character is the disposition to behave in a morally good way. Lickona advocates what he calls a comprehensive approach to character education, using direct and indirect methods, that seeks to develop full moral character—its cognitive, emotional, and behavioral aspects—and to do so through the total moral life of the school.

Lickona's perspective, as well as that of many other proponents of character education, has its roots in the ancient Greeks. For the Greeks the purpose of life was to achieve the good life and the qualities that made a life excellent were referred to as virtues. Aristotle emphasized habituation and Plato reason in the achievement of the virtues, but they both be-

lieved that ethical behavior could be taught and that virtues were in fact dispositions to do good. Virtues could also be referred to as traits. The good person was therefore the virtuous person.

COMMON THEMES

In the United States, character education has been rooted in two persisting conditions. First, it has been rooted in the need to fulfill one of the essential requirements of a representative democracy—the development of moral and civic virtue in the citizenry. The second condition is found in the need to unify a diverse population by instilling a common set of values.

The call for character education in the twentieth century, however, goes beyond the conditions described above and its rationale can also be found in concerns about social instability and the values and well being of youth. For example, in 1935, Harry McKown, author of *Character Education*, a widely read book on character education, listed five sources underlying the need for character education: breakup of the home, rampant individualism, political corruption, propaganda (biased values in media), and crime. In 1991, Tom Lickona, in his seminal work *Educating for Character*, listed four sources of the need for character education: youth violence, troubled families, images in the mass media, and greed and materialism. The only source presented by McKown and not found in Lickona is political corruption, and it is worth noting that Lickona's book was written before the political scandals of the 1990s occurred.

The phrase *character education* has been used at the beginning of periods of interest to separate the new movement from prior practice. In the early movement the phrase *character education* was used to separate it from religiously based moral education, and in the later movement to separate character education from the moral/values educational approaches of the 1970s and 1980s.

The focus of character education has traditionally been on virtues or traits of character. Although the lists differ, nearly all approaches to character education contain lists of virtues. Character Counts, for example, a leading character education organization, lists six pillars of character: trustworthiness, responsibility, respect, fairness, caring, and citizenship. Controversy about the methods to be used to teach character has paralleled the broader educational debate over child-centered and teacher-centered approaches. Today, however, the term *character education* is widely accepted by both the proponents of child-centered approaches as well as the more traditional teacher-centered approaches. Early in the development of the recent character education movement many educators were uncomfortable with the phrase *character education*, sensing that it was too indoctrinative. Today, the phrase is more widely accepted and is seen as consistent with child-centered approaches.

In American schools at the turn of the twenty-first century character education, however defined, is part of the experience of schooling. While academics and advocates debate over the proper pedagogical approach schools should use, the most common pedagogy involves a blend of teacher-centered and student-centered approaches. In Larry Cuban's history of pedagogy in the America's classrooms in the twentieth century, he found that teacher-centered instruction dominated over the course of the century with a hybrid teacher/child centered approach making some inroads, primarily at the elementary level (1984). Given the wide diversity of school-based approaches to the development of youth character today, a precise definition of the phrase *character education* remains elusive other than to signal a concern about the character of our nation and especially our children.

James Leming

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STUDENTS AT RISK

The national high-stakes testing movement that has affected education reform in virtually every state in the country is rooted in efforts to understand and better educate at-risk students. Such students were perceived to have the deck stacked against them in terms of educational and social support at home, enriching activities available to them in their communities, and perhaps innate intellectual endowments that they could bring to the challenges of academic learning. What began as an individual testing movement to target the learning difficulties of particular students has emerged into a systemic movement targeting the teaching deficiencies of entire school systems. In fact, many critics of the American education scene argue that the entire nation is at risk for under-educating its student body.

This shifting of the locus of risk from the individual to the larger system to the entire society captures the slippery nature of the very concept “at risk.” What does the term actually mean, and how is it applied to individual students and their educational systems? While other authors in this volume address the systemic and societal factors that enhance and potentially compromise the education of American students in general, this chapter presents the state of current knowledge on what it means for individual students to be at risk for negative educational, social, and psychological difficulties. It also addresses how students overcome or cope with their risk statuses, and how schools and communities can work to support the healthy development of students at risk for negative outcomes.

To be deemed a student at risk is to be identified as possessing a high likelihood of experiencing exceptional difficulties, either academically, socially, or psychologically. Note that the term does not imply the manifestation of such predicted difficulties in the moment. Epidemiological studies have repeatedly shown that students born to particular circumstances or experienc-

ing particular early life struggles are at greater risk of experiencing a range of difficulties at some point in the future. Technically, then, risk represents a likelihood estimate. What is the estimated likelihood that children of specific circumstances will manifest later problem behavior? Scientific attempts to answer this question have led to the careful identification of risk factors and the complementary study of prevention science. Researchers have pursued the possibility that the capacity to clearly identify the factors that place students at risk for negative outcomes can also inform preventive efforts toward reducing the likelihood that such outcomes will ever materialize.

As studies of risk and prevention have matured, it has become progressively clearer that single risk factors have relatively little utility in predicting negative outcomes. Rather, it is the combination and interactions among risk factors that have proven most lethal to educational and larger developmental success. Understanding how these factors coalesce and how prevention efforts can counteract them has become the focus of contemporary research in this area. As researchers have come to better understand the situation-specific nature of risk, and the pathways by which high-risk outcomes develop, they have also come to identify approaches to healthy adaptation in the face of risky conditions, and the roles schools and communities can play in promoting such adaptation.

This chapter includes six entries that describe different components of risk and responses to it in the lives of children and adolescents. The first entry presents the state of current knowledge on risk factors. It addresses single risks that have been found to be most powerful in contributing to high-risk pathways. The role of poverty is particularly highlighted, as it has been found to interact with a host of other risk factors in a variety of ways that threaten the well being of students across levels of education. This entry emphasizes both individual-level (those residing within the person) and

environmental-level risk factors (threats posed externally or by the environment). Most importantly it describes how individual and environmental factors interact to create particularly high-risk conditions.

The second entry introduces the concept of resilience, the means by which students respond to or cope with risk in constructive ways. Just as risk is not an individual trait, but rather a condition spawned by an interaction of individual and environmental factors, resilience too describes a condition or process of responding to the world. Although it is fashionable to discuss the characteristics of resilient children, it is more accurate to consider resilient processes to coping with extreme stress. In this presentation, the concept of resilient mechanisms is presented to emphasize the dynamic nature of resilience. These mechanisms reflect the intersection of personal strengths with environmental supports. It is through such intersections that resilience is forged.

The third entry addresses prevention approaches. These approaches are designed to target risk factors and high-risk processes in part by attempting to promote the development of resilience. The entry begins with a description of the nature of prevention, including the conceptualizing of it in response to different levels of risk statuses among students. The latter part of the entry focuses on types of prevention programming. Youth mentoring and afterschool programs are particularly highlighted because of their current prevalence in school and community settings.

The fourth entry shifts from the prevention of negative outcomes to the promotion of healthy development. The entry includes an overview of the positive psychology movement, which claims that an excessive amount of intellectual energy and financial resources have been invested in the study of pathology, at the cost of under-studying how to support the healthy development of all children, including those at risk for negative outcomes. Within this context, Search Institute's developmental assets framework is presented, including an overview of the forty assets found to be most instrumental to healthy development. The entry concludes with a review of how communities across the country are attempting to put the developmental assets framework into practice.

The fifth and sixth entries focus on immigrant youth and racial and ethnic identity development, respectively. These entries were included because of the unique risks immigrant students face, along with

the unique opportunities they possess for building important strengths to cope with such risks. Given that the external support structure for immigrant students shifts dramatically through the process of migration, such students face particular challenges in accessing the external assets or resources needed for healthy development. Within the larger immigrant population of students there are critical differences with respect to racial background, parent occupations, and documentation status (documented versus undocumented). The nature of such differences has a major influence on the extent to which students will experience high-risk situations in their new country and new school placements.

The racial and ethnic identity entry builds upon the immigration entry, given the strong relationship between immigrant students' country of origin and their ethnic identity. But racial and ethnic identity development are much broader terms that apply to all students. These concepts tend to be more salient to students of color and ethnic minority groups, however, due to the encounters such students face in American society. Within the larger concept of adolescent identity development, racial and ethnic identity can be particularly important for students who are identified as being outside the cultural mainstream. We conclude this entry and the chapter with a summary of educational methods used to promote healthy racial and ethnic identity development in schools as a means of building resilience.

The overarching goal of the chapter is to present a range of research addressing students at risk, including approaches to promoting their healthy development. Although a wide range of research findings exist, the study of risk, resilience, prevention, and health promotion is very much evolving. This chapter presents the current state of our knowledge base, but the great likelihood is that it will be outdated shortly. As new breakthroughs emerge in the understanding of risk and resilience, prevention programs become more thoroughly informed. It is this iterative interaction of risk and resilience research with preventive and developmental practice that makes the study of students at risk particularly interesting, and holds open the possibility for finding approaches that can enhance the educational opportunities for those students facing the most serious developmental challenges.

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RISK FACTORS

Risk factors are the phenomena that contribute to or predict negative outcomes over the course of one's life. These phenomena can be internal characteristics of the person, such as psychological dispositions or emotional vulnerabilities. They can be external factors, such as environmental hazards or the lack of adequate environmental supports. The phenomena can be experienced as behavioral patterns, including repetitive self-destructive acts like excessive drinking or habitual careless driving. Finally, they can be biologically based, as in the case of brain damage and predispositions toward certain forms of depression.

By definition, risk factors do not, in and of themselves, equate to negative functioning. As the terms suggests, they place one at varying degrees of risk for negative outcomes. To be "at risk," from this perspective, is to be identified as exhibiting some degree and combination of the risk factors presented in this entry. But all students exhibit or experience risk factors in their lives to a certain extent, yet most would not be considered at risk. Although there is no formally agreed-upon definition of at risk, the term generally implies that the likelihood of experiencing negative outcomes, such as school dropout or a debilitating illness, is higher among those students exposed to or experiencing a combination of clearly identifiable risk factors.

THE PARTICULAR RISK OF POVERTY

Poverty consistently has been found to correlate with a wide range of negative outcomes, including health problems and educational difficulties. The pediatric researcher Steven Parker (1988) uses the concept of "double jeopardy" to capture the compounded effects of poverty on developmental outcomes. He has shown how poor children are highly exposed to certain risk factors, such as medical problems stemming from inadequate health care, family stress linked with unemployment, and parental depression resulting from the strains of daily economic survival. As a result of having inadequate resources, poor children have a harder time coping with many of the risk factors to which they are exposed. This dual problem of excessive exposure to

risky conditions and inadequate resources for coping with them contributes to what the researcher Paul Smokowski (1998) calls a "risk chain." As an example of this chain, poverty often links with parental unemployment or low wages, which in turn commonly links with parental stress and depression, which can link with child maltreatment, which is often followed by declines in school performance and related developmental difficulties.

So although poverty does not fatalistically determine negative outcomes, it is frequently a critical link within a risk chain. Even for powerful risk factors like poverty, however, specific processes must be enacted in order for such factors to culminate in the negative consequences they predict. The developmental psychologists Arnold Sameroff and Michael Chandler (1975) articulated a transactional model of risk to explain varying outcomes for children and youth exhibiting common risk factors. As a response to the predominance of linear main-effect models, which suggest that a single risk factor, such as poverty, can result in negative outcomes, Sameroff and Chandler showed that such factors interact with other variables to more accurately account for developmental and health-related prognoses. Specifically, the transactional model shows how inner strengths (such as hopefulness, intelligence, and social adjustment) and vulnerabilities (hopelessness, low intelligence, and poor social adjustment) interact with poverty and other environmental risk factors to produce varying outcomes. Among children and youth with a preponderance of inner strengths versus those with a preponderance of inner vulnerabilities, developmental and health-related outcomes are more likely to be positive. It is research of this sort that originally led to the concept of resilience: positive coping in the face of high-risk conditions.

The transactional model shows how internal and environmental factors interact with each other to create outcomes. In relation to this model many researchers, including Sameroff and his colleagues (Sameroff and Chandler 1975; Sameroff and Seifer 1983), and the cross-cultural developmental psychologist Emmy E. Werner (1993), have shown the cumulative effects of risk. Somewhat similar to the risk chain noted above, the impact of risk factors is compounded when they are combined with each other. In general, the greater the accumulation of risk factors, the higher is the likelihood of subse-

quent negative outcomes. Within the transactional and cumulative models, certain factors have been studied particularly well. These include such social risk factors as maternal health problems, maternal anxiety, impaired mother-child interactions, low maternal education, negative parental attitudes and values, unemployment, minority group status, inadequate social support, large family size, and stressful life events. Researchers consistently have found each of these individual factors to be predictive of negative outcomes for children and youth, including negative school outcomes. As they have shown, however, it is the cumulative effect of these risk factors that is particularly devastating. The more they cluster together, the greater the likelihood that negative outcomes will follow.

In the examination of risk clusters, poverty repeatedly emerges as an organizing factor. Increased health risks associated with poverty include malnutrition and difficulties stemming from it, such as a weakened immune system and the consequent increase in infectious diseases. The clustering of risks associated with poverty begins early in life, with low birth weights three times higher among poor families. But many children of poverty grow up to be healthy and well adjusted. In the sections that follow, core individual and environmental factors that link with poverty to create a heightened risk status are presented.

INTERNAL OR INDIVIDUAL RISK FACTORS

Three psychological factors have been particularly well studied with interaction models such as the one articulated by Sameroff and Chandler: intelligence, temperament, and attachment. Researchers often refer to intelligence as genetic endowment to emphasize the innate or native contribution to cognitive functioning. Although it is clear that intelligence, as measured by most standardized assessments, is highly susceptible to environmental stimulation, including high-quality education, it also is clear that there is an innate, genetic component to intelligence. For example, students with severe neurological or chemical brain abnormalities are limited with respect to environmental responsiveness, and have been shown to be at risk for school difficulties and other negative repercussions. From the perspective of genetic endowment, then, intelligence-related risk is largely

a function of being limited in one's capacity to utilize environmental supports in response to the daily challenges of living. Within the school context, students who are severely limited in genetically based intellectual functioning will be less capable than their peers of learning from the school curriculum and educational support structure.

Beyond the obvious risks posed by inherited cognitive limitations, low intellectual functioning also has been shown to be an important risk factor. Precisely because intelligence is so susceptible to environmental influences, young children from understimulating home environments often come to school unprepared to learn. While the majority of these children have the genetic endowment required to succeed in school, their pre-formal education years have underprepared them for the demands of early formal education. Because such children are ill equipped to take advantage of the intellectual enrichments available in school, the assessment of their intellectual capacities tends to be negative. As a result, children who begin school behind their peers intellectually tend to fall further behind over time. As this occurs, another risk chain often ensues: early low intellectual functioning results in early school difficulties, which lead to frustration and behavior problems, which lead to alienation from school and often difficulties with parents. The end result of such a chain is typically high school dropout, which is then predictive of long-term employment and health problems.

The bottom line is that low intelligence, whether a product of inherited genetic capacities or environmental deprivation, is a powerful risk factor for a host of negative outcomes. Because poor children are frequently reared in homes by parents with relatively low levels of education who are struggling to make a living, their home environments often are antithetical to school readiness. In many cases the minds of children from poor and low-income families are underprepared for formal schooling. As a result, by early elementary school the measured intelligence of such children commonly is lower than for children of middle-income families and higher. Therefore, poverty and intelligence become interconnected as a particularly potent cumulative form of risk.

Temperament is another risk factor that has been studied widely, and, like intelligence, can be viewed either as primarily genetic or as an interaction of

genetics and the environment. Researchers such as the developmental psychologist Jerome Kagan (1984) define temperament as an innate, neurobiologically based predisposition toward interacting with the world and the people in it. Kagan has shown how variations in infants' levels of agitation and sensitivity to environmental stimuli can place them at varying degrees of risk for subsequent psychological and social adjustment. Infants who are easily agitated from birth and hypersensitive to environmental stimuli typically display greater degrees of difficulty over the course of their childhood and adolescent years, and into adulthood.

The research of Kagan and his colleagues has shown one particularly strong temperamental trait—inhibited versus uninhibited responses to the environment, particularly to novel experiences—that has clear implications for risk and resilience. Highly agitated and stress-reactive infants often show clear signs of caution and inhibition by early childhood and into the early school years. The reverse commonly is true of children who display a calmer adaptability to environmental stressors; they tend to become more assertive and less inhibited. Kagan and his colleague Howard Moss (1962/1983) followed inhibited and uninhibited children over time and found different adjustment profiles for each type. From a risk factor perspective, their findings show that extremely inhibited children in early elementary school typically have difficulties with peer relationships throughout childhood, and often suffer difficulties with self-confidence in adolescence and into adulthood. Extremely uninhibited children confront different risks. Their fearlessness can place them at odds with authority figures, including their parents and teachers, and as a result make it difficult for them to follow the adult directions required to succeed in school.

Like most temperament researchers, Kagan and his colleagues acknowledge that even though there is a strong biological component to temperamental styles, the environment plays an essential role in modifying and even shaping the contributions of temperament. Therefore, while the educational environment may not play a large role in changing temperament itself, it is a fundamentally important context for influencing the outcomes of temperamental dispositions. Through an innovative approach to working with withdrawn (inhibited) and aggressive (often uninhibited) children together, the social and

clinical psychologist Robert Selman (1997) has shown how structuring the interpersonal environment to meet the needs of temperamentally or psychologically different children can lead to important alterations in interpersonal functioning. Withdrawn children can learn to be more engaging with peers, given ample support, just as aggressive children can learn to be more considerate and cooperative. Selman and his colleagues (Selman, Watts and Schultz 1997) have used this model of pair therapy in educational and clinical settings to help children of varying temperamental dispositions adjust to each other, and, in turn, the larger world of interpersonal relations.

Renowned temperament researchers Stella Chess and Alexander Thomas (1995) view temperament strictly as an interaction between genetic predisposition and environmental receptivity. They do not consider the biological contribution alone to constitute temperament *per se*. Rather, contribution only becomes manifested as a temperamental style through the experience of being shaped by the environment. Their longitudinal research has shown that genetic predisposition alone is fairly limited as a predictor of subsequent adjustment, and that the nature of parenting or caretaking, as it interacts with genetic predisposition, is the primary determinant of what they term temperamental types. These types represent how children grow into temperamental responses to the environment, including school. The easy temperamental type is marked by low agitation and quick adaptability to varying situations and contexts. The difficult type, in contrast, is marked by high agitation to stimuli and poor adaptability. In the middle are the slow-to-warm-up types. They adjust and adapt more slowly and cautiously than the easy types, but show less agitation and anxiety than the difficult types.

As with intelligence, whether temperament is viewed as largely genetic or an interaction of heredity and the environment, it has been found to be an important predictor of developmental outcomes, both negative and positive. The Chess and Thomas (1995) model offers particularly important information for educators. Their research shows that the “goodness of fit” between the child and her environment is instrumental to the shaping of temperament and its consequences. Although temperamental styles are largely determined by the beginning of elementary school, if the school environment can work ef-

fectively with a difficult temperamental style, for example, it can help modify the impact of that style. Temperamentally difficult children are not fated to negative school experiences or other problematic consequences, but if the school environment does not provide a good fit for such children—that is, if it is not responsive to such children’s needs—it is likely that the temperamentally difficult child will develop a history of school resistance and related negative outcomes.

Whereas intelligence captures the cognitive or rational side of development, and temperament captures core physiological and psychological responses to the environment, attachment addresses the foundations of emotion-based experiences in childhood. By focusing on the early bonding experiences of children and their primary caretakers, particularly the mother, researchers have found that strong, stable attachment patterns emerge early on in life. Psychologist John Bowlby (1988) initiated a long line of research into what he termed attachment theory, which addresses the various processes through which children forge patterns of attachment bonds with their primary caretakers. Bowlby found that inconsistent and distant parenting processes tended to result in insecure or highly anxious attachment patterns within infants and young children, whereas warm and consistent parenting practices tended to produce securely attached children. Later generations of attachment researchers have found that early insecure attachment patterns make subsequent relational connectedness difficult.

Specific risks that have been found to result from insecure attachment patterns include the propensity to be distrustful, emotionally distant and unstable, and to experience low self-esteem. Children who have difficulties securely attaching to parents tend to have difficulties in later relationships as well. This pattern of relational struggle is an obvious precursor to the emotional difficulties experienced across a range of contexts. Students with profound attachment problems struggle in school on multiple levels. They have difficulties with peer and teacher relationships, and largely as a result of this they tend to struggle with self-confidence. Early detection of attachment problems is critical to longer-term school success. If educators can connect with socially insecure students and help them connect with their peers in constructive ways, then those students will be more likely to de-

velop a positive association to school. If, on the other hand, such students do not connect in constructive ways with their teachers or peers, they are placed at high risk for social isolation, depression, and suicide, or for connecting with peers in antisocial or self-destructive ways.

EXTERNAL OR ENVIRONMENTAL RISK FACTORS

The various internal or individual risk factors described above interact with environmental influences to result in a virtually infinite array of outcomes. Early psychological research on risk and resilience focused heavily on the notion of environmental stressors. Groundbreaking contributions from the psychologists Norman Garmezy (1986) and Michael Rutter (1990) were particularly important to better understanding the internal management of stress that is induced by highly noxious environments. When living under extraordinarily taxing psychological or social conditions, the individual body and mind must adapt in novel ways. While such demands to adapt to excessive stress can build strength, as will be discussed in the resilience section below, they also create mental strain, and carry the capacity to promote emotional breakdown.

While poverty, as discussed above, is associated with a wide range of environmental stressors, many forms of environmental risk exist apart from poverty as well. Child abuse is one of the most debilitating stressors, often resulting in immediate declines in educational and psychological functioning, and, depending on its nature and duration, is associated with a grim developmental prognosis. Sexual abuse, for example, is associated with social and psychological boundary violations, making it difficult for survivors of such abuse to form healthy intimate relationships with friends and subsequently with romantic partners. Physical abuse, on the other hand, can lead to students behaving in overly aggressive and violent ways, or to becoming timid and excessively fearful. Emotional abuse and neglect, while perhaps less dramatic, also leaves long-term scars, with children often internalizing negative self-portrayals or feeling that they are not worth the time of potentially caring adults. Whatever the form of child abuse, the stress experienced from it tends to overwhelm the healthy coping abilities of students, typi-

cally leading to one or another form of maladaptive behavior.

Child abuse in its varied forms represents an extreme end of the environmental risk continuum, and for that reason it warrants the degree of attention it receives from researchers and interventionists alike. Inadequate social support, on the other hand, is less dramatic and historically has received less systematic attention. But research in the areas of resilience, youth mentoring, and developmental assets, each of which are addressed in separate entries within this chapter, has served to heighten the national awareness of social support as critical to healthy developmental outcomes. Accordingly, the absence of adequate social support is now viewed as a critical risk factor in the lives of many children and youth.

Parental neglect is a particular form of emotional malnutrition. Because of the fundamental role played by parents and caretakers, parental neglect can be hard to overcome even when other social supports are available. Nonetheless, the resilience researcher Michael Rutter (1990) has shown that the availability of at least one caring nonparental adult, whether within or outside of the family, can compensate for the presence of other risk factors, including parental neglect and abuse. On the other hand, the lack of caring adults outside of the family is associated with multiple negative outcomes, including poor school performance. Students who seek support from peers at the exclusion of adults are especially at risk for school failure and delinquent or antisocial behavior. In what they termed a "problem behavior syndrome," researchers Richard and Shirley Jessor (1977) found that as youth distance themselves from the adult community they are placed at risk for developing a cluster of negative behaviors including poor school performance, aggressive and delinquent behavior, and early and unsafe sexual involvement. Like the risk chains discussed above, problem behavior syndromes emerge from an interaction of internal characteristics and external environmental influences.

Apart from caring adult influences, inadequate social support can result from a lack of structured activities for students. The afterschool or out-of-school-time movement, which has gained great ascendancy over the past decade, emerged from two separate research tracks. The first track showed that low-income students often did not have the family support necessary for completing required homework

or for engaging in educationally enriching activities. Afterschool programs were thus set up to address these educational disadvantages. At the same time, research was accumulating to show that community violence and related forms of antisocial behavior were escalating in the hours just after the school day, from 2:00 to 6:00 p.m. Afterschool programming was called upon to address this phenomenon. Therefore, educational risks and the risks of violence and antisocial behavior combined to fuel the proliferation of afterschool programming, which in turn has been viewed as a critical means for redressing the lack of social support in the lives of many children and youth.

It is important to note that the lack of social support is not exclusive to poor and low-income children. Highly educated, career-oriented parents have contributed to the latchkey child phenomenon, which is fundamentally a form of inadequate parental support. As hard-working parents, whether blue collar or professional, strive to progress economically and otherwise, children often pay a developmental toll. Economic resources only account for so much developmentally; children whose parents are either absent or overly stressed by the demands of work experience a lack of support which they typically seek to find elsewhere. When they find it primarily through peer connections, without a contribution from caring adults, the results tend to be negative.

Physical and mental health problems of parents constitute another form of environmental stress for children. The psychiatrist William Beardslee (1997) has shown the profound effects of maternal depression on children's educational and larger developmental outcomes. Children of depressed parents have higher school failure rates, heightened experiences of attention deficit disorder, and are more prone to social withdrawal and defiant behavior. Such children are also more likely to experience their own depression, and the negative outcomes associated with it, including suicidal ideation, increased drug and alcohol use, and school failure and dropout. Family depression is made particularly lethal because of the stigma of talking about it. Parents fear that addressing the issue will make life more difficult for their children, and as a result of keeping the secret hidden they exacerbate its negative effects. Common causes and consequences of depression include divorce, alcoholism, unemployment, homelessness, and other physical and emotional ailments. Untreated

depression, according to Beardslee (1997), is likely to erode or dramatically alter the sense of continuity in the family story, or the way the family sees itself. As the family story becomes progressively defined by the consequences of depression, children of depressed families come to see themselves in the light of these negative attributes.

The final set of environmental risk factors includes those that stem from the attitudes of society: racism, sexism, and homophobia. When children and adolescents experience pervasive messages that they are inferior due to their race, gender, or sexual orientation, the consequences tend to be profoundly negative. Institutionalized racism results in a lack of equal opportunity for members of racial minority groups in our society. This experience is a particular form of inadequate social support on one hand, but adds an additional psychological layer of stress as well. The message of institutionalized racism is that one is not worth supporting due to her racial group affiliation. Racial identity development researchers such as William Cross and Linda Strauss (1999) have found that African American students, for example, go through common phases or stages of racial identity development, based in part on experiences of racism in their schools and larger communities. A core stage is to actively oppose or resist the dominant culture in the face of racial stereotyping. If youth remain in this phase for prolonged periods of time, it has negative consequences for school performance and subsequent occupational success. It is important, according to Cross and other racial identity development researchers, that schools or other societal contexts provide safe spaces to explore experiences of racism in order for youth to move on in healthy and productive ways.

Similarly, gender development scholars such as Lynn M. Brown and Carol Gilligan (1992) have shown that girls approaching early adolescence often hide parts of themselves in order to cope with gender-based stereotypes that pervade both mainstream and youth culture. Many adolescent girls, for example, suppress their intellectual strengths and vocal assertiveness in order to “fit in,” or simply not be noticed. Sexism, whether it comes from explicit messages in the immediate environment or implicit messages that have been internalized over time, compromises opportunities for both males and females. The recent proliferation of studies of boys and young

men has shown a clear pattern of compromise as well. Many adolescent boys suppress their intellectual strengths in order to avoid taunts of being effeminate or a bookish “nerd.” As a means of overcompensating for potential perceptions of weakness, boys are at particular risk for acting out aggressively and engaging in antisocial behavior. Girls, on the other hand, are at higher risk for internalizing problems, such as depression and feelings of worthlessness. For both males and females, sexist stereotypes risk alienating students from their core strengths, and serve to suppress particular forms of educational achievement and intellectual creativity.

Homophobia is related to sexism, and in some respects is a particular form of it. Only recently have researchers begun to clearly identify the risks associated with sexual orientation for gay, lesbian, bisexual, and transgendered (GLBT) students. In response to the insults, threats, and ostracization they commonly experience, many GLBT students suffer extreme forms of anxiety, depression, and deflated self-worth. Suicidal attempts and completions are particularly high for this group of students, as are problems with drug and alcohol use. Just as researchers have found it important for racial minority students to have safe places in and outside of school to share their experiences and receive support, so too is that the case for GLBT students. Without such opportunities, such students are at increased risk for hiding their experiences within themselves, and turning their anger inward. The result of this strategy often ends tragically in such outcomes as addiction, school dropout, and suicide.

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RESILIENCE MECHANISMS

Healthy, well-adjusted children are not necessarily resilient children, according to the use of this concept in contemporary studies of risk and human development. Resilient children and youth are those who have faced unusual degrees of stress in their lives and yet have managed to cope relatively well. The studies of resilience that have emerged over the past quarter-century have in part been a response to the question: What allows some children from particu-

larly challenging backgrounds to grow into healthily functioning adolescents and adults while so many of their contemporaries get lost in the problems commonly associated with difficult living conditions? This question carries critical implications beyond the interests of basic research. If clear and supportable answers can be provided, the hope is that preventive and developmental programming might be created to help more children survive and even thrive in the face of adversity.

This entry presents contributions from classic studies of resilience that have shaped our current understanding, and more recent research that captures the cutting edge of resilience theory. Resilience is arguably the most popular and widely studied concept within the field of psychology today. After a century of investment in the study of psychopathology, the field of psychology has embarked on what it calls the “positive psychology movement.” The movement is intended to counterbalance our emphasis on understanding what goes wrong in human development at the cost of better understanding how to promote optimal functioning. The positive psychology movement is very much grounded in the concept of resilience, although the latter is only one particular form of positive development. As noted at the outset of this entry, healthy development does not necessarily imply resilience; ideally, healthy outcomes would emerge without the need to confront excessively health-compromising challenges. But because resilience research is rooted at its core in problems or risk factors, and is focused on responses to those problems, the study of resilience helped pave the way for a broader focus on optimal functioning or non-problem-based healthy development as well.

Just as the impact of risk factors is better understood by examining interlinking chains of risks or transactions among different types of factors, resilience is best understood as a mechanism or process, rather than as a singular factor or even collection of individual traits. In fact, many researchers argue that it is misleading to describe resilient children, as though they have particular characteristics that prevent them from harm. It is more accurate, they argue, to describe “resilience mechanisms” that show how various factors interact to allow particular children to confront risk successfully while others fall prey to its predictable negative consequences. Although we describe certain individual traits that have

been found important to the development of resilient responses to environmental stressors, we heed the caution that the labeling of resilient children can be just as misleading as the labeling of at-risk children. In that vein, an emphasis is placed on the mechanisms and processes that tend to build resilience in children and youth rather than presenting descriptions of resilient youth in contrast to those deemed to be at risk.

THREE FOUNDATIONAL MECHANISMS

The developmental psychologist Norman Garmezy was instrumental in establishing resilience as a defined field of research (Masten and Coatsworth 1998). He also was among the first researchers to carefully show that resilience emerges out of interacting human and environmental variables, and is therefore properly understood as a mechanism rather than as an isolated factor or even set of factors. Specifically, Garmezy and his colleagues (1988) articulated three types of resilience mechanisms, each of which interact with each other.

First, they discovered personality mechanisms that proved particularly helpful to accessing other forms of available support. It was not the personality traits or styles in and of themselves that led to resilient responses to environmental stress, but rather the processes by which certain personality types facilitated engagement with other resources. Specifically, personalities marked by a cheerful disposition tended to result in the adult community—teachers, parents, and other adults—reaching out in supportive ways in the face of inordinately challenging circumstances or profound losses. Similarly, assertive personality types were found to more effectively gain access to available resources. On the other hand, children who were more despondent or withdrawn were more likely to have difficulty receiving the support they needed in the face of difficulties.

By accessing adult resources, a resilient process is put into motion. Relationships are built that provide access to material resources, thereby allowing opportunity development in school or community settings. From these experiences, a positive sense of self or self-concept is likely to develop, along with a feeling of mastery or competence in multiple areas of functioning. As this larger mechanism

of growth evolves, youth are then able to cope more effectively with extreme difficulties that come along and to recover from past traumas that may have placed them at risk for more negative outcomes. In some of the resilience literature, this personality-based mechanism is referred to as support-seeking behavior. Children who develop the capacity to seek and successfully solicit adult support are more likely to survive difficult life conditions and ultimately thrive developmentally than those who have not developed this capacity.

Although the capacity to access support from the adult world is important to the building of resilient processes, there are dramatic differences in the degree of support potentially available to children and youth. Not surprisingly, Garmezy and his colleagues (1988) found the family system to be the core environmental contribution to the establishment of resilient mechanisms. If the immediate family unit is relatively supportive, stable, and cohesive, personality mechanisms are not as essential to the building of resilient processes. If children, whatever their personality disposition, are socialized into receiving support as a family norm, they learn to access it in other realms as well. The opposite holds when families are nonsupportive, unstable, and incohesive; such conditions make it particularly difficult to access support and develop the personal competence required to cope with stress and excessive challenges. In other words, the family system can generate its own resilience mechanism largely apart from personality. It can socialize children in ways that encourage positive self-concept, and help them build habits for engaging with learning, both formally and informally.

Fortunately, there is a third mechanism that allows children to build resilient responses to environmental challenges even if they are not of an optimal personality disposition or the beneficiaries of an adequately supportive family. External support systems are those that exist outside of the family, including schools, religious institutions, youth centers, and other community-based organizations. In many cases these external support systems intentionally reach out to youth who may otherwise be left without support precisely because of their personality styles or lack of guidance at home. Traditionally, counseling and intervention services in schools and community health centers were considered the primary resources for children in particular need of support. Today,

however, positive youth development programming has become increasingly more available, particularly as the resilience research depicts the importance of caring adult relationships outside the home. Mentoring programs are booming, as are afterschool programs. Although education often is addressed directly through such efforts, the establishment of close, supportive relationships with non-familial adults tends to be at the core of these programmatic mission statements. If such relationships can be developed, educational and other forms of competence are more likely to ensue.

These three resilience mechanisms—personality, family system, and external support—can work independently of one another in the development of resilience and, in fact, the family unit often is the primary source of stress to which the other mechanisms must respond. However, the most potent resilience processes emerge from the convergence of these mechanisms. When the conditions of each mechanism are favorable, children are in the best position to healthily cope with the stressors they encounter. For example, poor children living in dangerous neighborhoods stand the best chance of thriving if their personality style allows them to access adult support; their family unit is relatively supportive, stable, and cohesive; and they have access to external supports in their schools, neighborhoods, or faith communities.

PROTECTIVE FACTORS

The dynamic conception of resilience mechanisms evolved from a prior focus on protective factors. Working during approximately the same period as Garmezy and his colleagues, the British psychologist Michael Rutter (1990) became interested in learning how it is that many children living in adverse conditions develop healthily. After originally conceiving of protective factors as the converse of risk factors, Rutter soon developed a more complex model in which protective factors were defined exclusively as helpful to individual growth only under conditions in which particular risk factors were present, and only in response to specific outcomes. As a simple example, the presence of supportive afterschool programming would prove helpful to educational outcomes or relationship development only for students at risk for poor school achievement or relationship

problems. For students not experiencing risks in these areas the outcomes would remain unaffected; that is, the low-risk students would not be negatively affected but neither would they be positively affected because there is no need for change. The relationships between risk factors, protective factors, and developmental outcomes can be much more complex than this, of course, but Rutter's model held under all conditions: protective factors were defined as exclusively beneficial to youth facing particular risks for particular outcomes.

Rutter's (1990) original research from the 1970s combined with Garmezy's (1986) to spawn a burst of research focused on the identification of resilience processes, which came to be understood as a dynamic relationship among risk factors, protective factors, and specific outcomes. This emphasis on specific relationships among variables was important to countering the myth that certain traits serve resilient purposes across all conditions. A strength, like athletic prowess, might prove beneficial in one context while creating risks for low-academic achievement in other contexts. The direction set by Garmezy and Rutter made clear that risk and resilience needed to be understood in context. On the other hand, however, the complexity of their situation-specific models created concern that all resilience findings were relative and somewhat idiosyncratic and that little had broader-based implications.

This concern led to other approaches to addressing protective factors, in which complex protective processes were juxtaposed with findings showing that certain qualities or experiences serve an important developmental function for all youth, whether or not they are at risk for particular outcomes. Two psychologists from New Zealand, David Fergusson and John Horwood (Fergusson, Horwood, and Lynskey 1992) followed children in their native country for more than two decades and learned that key factors which served a protective function for children living in adverse conditions also played a positive role in the lives of those who were not at high risk. In presenting their findings they differentiate the protective factors into two categories of processes: protective processes and compensatory processes. The former fit the classic definition of protective factors articulated by Rutter (1990); they interact with risk factors to mediate or reduce the negative impact of the risk factors on selected developmental outcomes.

Compensatory processes, on the other hand, describe dynamic interactions that prove to help all children grow healthily, whatever the risk status of the particular child. For children living in relatively low-risk conditions, compensatory processes allow them to adapt to and cope with everyday or typical levels of stress.

Key factors found to serve protective and compensatory functions for children include high cognitive ability or intelligence, strong attachments or relationships with parents and with peers, and high self-esteem. Whether a child was deemed to be at high risk for negative outcomes or within a normal range of risk, each of these factors contributed to adaptive processes associated with positive outcomes.

RESILIENCE AND THE DEVELOPMENT OF COMPETENCE

The psychologist Ann Masten is an early colleague of Garmezy's. Through their collective efforts and her partnerships with other colleagues (Masten and Coatsworth 1998), Masten came to see the development of competence in various domains as critical to understanding resilience (Masten and Reed 2002). While competence commonly is a marker of resilient behavior in children and youth, it is not necessarily the cause of resilience. Rather, the two are related to one another and are likely the products of similar health-promoting processes. As youth develop competence in various arenas, however, they are likely to respond resiliently to subsequent challenges or adversities they confront.

Masten and her colleague J. Donald Coatsworth (1998) have shown how cultural context plays a crucial role in the development of social and behavioral competence. They found that resilience among children living in particularly adverse conditions is manifested as competent adaptive responses to culturally or contextually specific stressors. Each context or larger culture poses developmental challenges or tasks that children must meet successfully in order to survive and thrive. Some of these developmental tasks hold across cultures, such as learning to connect meaningfully with caregivers, peers, and other acquaintances. Children who do not develop the competence required to address this task will likely suffer in virtually any culture. Other tasks, including educational success, are culturally determined and the

nature of competence in these areas is relative and variable.

The foundations of subsequent competent behavior begin to develop very early in the life cycle. The development of early motor skills, for example, is necessary to meet developmental challenges in the physical domain. Children who display strong motor skills early on tend to experience mastery at home, on the playground, and subsequently in school. Early experiences of joy and self-worth are derived from childhood physical accomplishments. Language development also allows children to engage the world of potentially supportive adults. Success in this arena is especially rewarded in cultures that value verbal skill and literacy-based education. Meeting the developmental tasks of language development in a timely manner places children on track for successful academic accomplishments and the psychological rewards that brings within many cultures.

Motor and linguistic skills combine in early childhood and beyond to build self-confidence, and to allow for successful play both alone and with peers. In other words, early competence in these basic areas increases the likelihood of developing more complex competencies as children get older. Advanced manifestations of competence include motivational dispositions (the motivation to achieve in school, in athletic pursuits, and in relationships) and self-efficacy, or the sense that one is essentially competent in specific domains. The motivation to take on complex challenges evolves out of the early experience of success in accomplishing more basic tasks. In this regard, success breeds success. As children experience competence they take on progressively more challenging tasks, the end result of which is a solid sense of self-efficacy or the belief that one can successfully meet the demands of environmental context.

Masten's studies have resulted in the articulation of a developmental schema for building competence, with implications for formal and informal education (Masten and Reed 2002). During infancy and throughout the preschool years three primary systems of interaction contribute to the development of competence. The first are what she terms attachment systems. The experience of building relationships with caring adults allows for the development of problem-solving skills in toddlers. It also contrib-

utes to the second primary system of early childhood: self-regulation of emotions and stimulation levels. Self-regulation of emotion and stimulation allows for effective exploration of the environment. Early experiences of self-regulation are critical to subsequent success in the classroom and with peers. Young children who struggle with self-regulation are at greater risk for anxiety, depression, and aggressive behavior during the school years and beyond.

Compliance and prosocial behavior grow out of self-regulation, and, like the prior systems of interaction, are essential to subsequent educational achievement and social adjustment. Parenting styles play a key role in the development of compliance and prosocial behavior. Parenting styles that include consistency, care, warmth, and firmness are most likely to lead to compliance and prosocial behavior. Compliance is not to be confused with passivity here, but is rather the willingness to comply with adult norms and expectations due to a history of trust and early support. Authoritarian, controlling, and hostile parenting styles, on the other hand, are associated with lower levels of compliance and internalization of prosocial standards. Similarly, parenting styles that lack consistence and firmness are associated with the development of unclear boundaries and ambivalent responses to adult expectations.

During the school years, Masten and Coatsworth (1998) found that social competence with peers, socially appropriate conduct in and outside of school, and academic achievement were the hallmarks of competence. Students who manifest skills in these areas typically are able to respond resiliently to everyday challenges. Social competence with peers has clear roots in early parenting and self-regulation processes. Young children who experience rejection or lack of support from their parents, tend to respond with heightened degrees of aggression in school. They tend to make hostile attributions to benign social interactions, often leading to fights with peers or social ostracization. This problem is compounded when ostracized children seek the support of each other, often linking one set of maladaptive social skills with another. Conversely, socially competent children tend to find one another, thereby building upon each other's strengths and increasing their collective competence within their schools and communities.

Socially appropriate conduct is the school-age equivalent of early childhood compliance. Building

on the foundation established largely within the family in early childhood, school-age children take cues from teachers, other adult authority figures, and peers as they learn how to abide by general norms for constructive social interaction beyond the family. If children do not learn socially appropriate conduct in the early years of formal schooling, academic achievement tends to deteriorate over time. This pattern is quite self-explanatory as negative reactions to teachers' directions are a common manifestation of socially inappropriate conduct. Given the power of early schooling as a predictor of later educational success, early competence in the social domain is critically important to the development of competence educationally. Academic achievement is, of course, influenced by a host of factors outside of social conduct, including cognitive abilities, beliefs, attitudes towards school, and the motivation to succeed. As the school years progress, each of these factors becomes more strongly associated with one another and with social competence. In short, patterns of competent behavior emerge that tend to blend these individual contributions into a larger coherent dynamic.

Nancy Davis (1999) has built on the work of Masten, Coatsworth, and others to define six types of competence associated with resilience. The first is physical competence, which includes good health, along with the more common indicators such as athletic performance and physical attractiveness. Second is social and relational competence, stemming from strong early attachment experiences. Insight and self-awareness are aspects of social and relational competence that are important throughout childhood and become progressively more complex in adolescence. Third, cognitive competence includes basic intelligence as measured by IQ and emotional understanding. It also includes language acquisition and reading skills. The ability to learn from one's environment and plan ahead is an important marker in this area. Emotional competence is the fourth type delineated by Davis. It includes the capacity to regulate emotional responses and the ability to delay gratification. Realistically high self-esteem, creativity, and a good sense of humor are additional outcomes of emotional competence.

Moral and spiritual competence conclude Davis's typology. Moral competence reflects the ability and desire to contribute to society. This requires the ca-

capacity to reason morally, and to experience empathy and generosity. The hallmark of this competency area is the capacity to act fairly out of a sense of caring for others and an appreciation for equity and justice. Spiritual competence is rooted in the capacity to find meaning in life, whether that occurs through religious involvement or other forms of spirituality. For adolescents, organized religion has been found to serve a powerful protective role in the face of adverse life conditions, in part because of the supportive structure available through religious institutions, and in part because of deep prosocial beliefs associated with organized religion.

HOPEFULNESS AND FUTURE ORIENTATION

By middle adolescence, youth who have developed tangible and realistic ideas of what they want to do in the future are more likely than those without such conceptions to exhibit resilient responses to adversity. The Finnish researcher Jari-Erik Nurmi (1991) describes three key processes that comprise an orientation to the future: motivation, planning, and evaluation. Motivation refers to a desire to accomplish particular goals. Planning reflects the realistic thinking required to make such motivation a reality. And evaluation refers to the self-assessment of progress toward meeting one's goals, along with the ability to modify both the goals and the associated plans for achieving. The ongoing cycle of motivation, planning (and acting according to the plan), and evaluating represents a healthy and realistic future orientation. According to Nurmi, these interactive processes play an important role in identity formation in adolescence as young people become identified with their future direction, and build a sense of self-efficacy as that direction is successfully acted upon.

Finally, many researchers have found hopefulness to be one of the most obvious indicators of resilience. Hopefulness is as much an end product of a developmental trajectory defined by competent behavior in the areas described above as it is a contributor to resilience. As with most of the concepts presented in this entry, hopefulness is representative of a dynamic process rather than being an isolated trait of certain individuals. As children and youth meet the challenges of their lives with support from the environment in a manner that allows

them to build competence, they become more hopeful that they can respond successfully. Again, success breeds success. Hopeful youth are likely to have realistic plans for the future, and successful action taken on behalf of those plans leads to a further increase in hopefulness. Self-confidence is a common result of this dynamic process, and, if utilized prosocially it contributes not only to individual resilience but also gets manifested in contributions to the community, which in turn creates opportunities for future generations of children and youth. In short, resilience is best understood as an endless interconnected human cycle rather than as a static trait of strong individuals.

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RISK AND PREVENTION

Theory, research, and practice in the broad area of prevention has grown dramatically over the past quarter-century. This trend is attributable to a variety of intersecting factors, the most influential of which come from the field of public health. By studying the causes and correlates of such deadly diseases as cancer, heart problems, and diabetes, public health researchers set the groundwork for preventive interventions in the medical field. By more accurately understanding how diseases develop, it became possible to strategically prevent their occurrence or at least reduce their further escalation. Successful prevention efforts in the medical/physical realm encouraged mental health and education specialists to pursue similar strategies.

In the mental health area such persistent problems as depression, addiction, and antisocial or criminal behavior became early focuses of prevention efforts, while in education the emphasis was placed on school failure, dropout, unhealthy peer relationships, and school violence. Over time the list of issues on which prevention efforts have focused has mushroomed, just as approaches to preventive interventions have taken a multitude of forms. Still, the results of prevention efforts in and outside of schools have been mixed. Prevention theory, derived from ongoing research, has grown more sophisticated, allowing for progressively more focused and strategic interven-

tions. At the same time, however, funding for prevention research and practice has been inadequate to allow for definitive answers to questions of best practices, cost effectiveness, and related implementation concerns.

A challenge to prevention work in the mental health and education arenas is that the critical issues tend to be complexly influenced. It may be easier to isolate the common causes of physiological pathology than it is mental health and education problems. Because these latter concerns are so multi-influenced, researchers must rely on complex correlational models of potential contributing factors rather than isolating single risk factors or causal processes when designing their studies. These complex studies rarely lead to simple results. Further, because it typically is difficult to name "the cause" of the problem at hand, it is similarly difficult to influence public policy in the direction of prevention program funding. The end result of this struggle is that most prevention work is funded through patchwork entrepreneurial efforts, and little of it has sufficiently adequate evaluation funding to study the effectiveness of the particular approaches within their particular contexts.

In the education realm, the current emphasis on standardized, high-stakes testing has deterred schools and school systems from taking any curricular time away from those key content areas to be covered by the exams. In this climate, prevention efforts are at times viewed as a distraction from the "core mission" of the school. As a result, there has been a reversion back to reactive behavioral interventions targeting the highest-risk students. If time, effort, and resources are not invested in early prevention and health promotion, it only stands to reason that the problems those approaches are designed to address will crop up in greater magnitude as the students progress throughout the school years. In this entry the core elements of prevention are presented, with an emphasis on educationally related prevention programming, including the current state of the research and evaluation on particular prevention models.

PRIMARY PREVENTION

Certain preventive approaches are targeted toward entire populations without regard to risk level or

vulnerability. In the public health arena, advertising campaigns promoting seat belt use successfully targeted the entire United States population, resulting in widespread reductions in car accident deaths. This finding can be juxtaposed to advertisements focused on drinking and driving, which clearly are targeting a category of drivers at particular risk for car accidents. In the education arena, formal schooling itself has been referred to as a form of primary prevention: all children of a particular age are targeted for literacy and numeracy training to build skills that will make them more employable, and thereby less at risk for problems associated with joblessness and poverty. Early intervention efforts to address literacy and numeracy delays, on the other hand, are targeted to particular at-risk populations.

Primary prevention refers to those approaches that target entire populations without regard to risk status, and is differentiated from early intervention or other forms of prevention, which are described below. In the world of education, primary prevention historically has been linked with the practice of developmental guidance. Today, virtually all school systems around the country have guidance programs, which conceptually are designed to address common developmental concerns that have implications for all students. Making friends is an example of an early elementary school concern: all children need to develop friendship-making skills to help prevent isolation, loneliness, aggression, and violence. By middle school, universal prevention themes include a focus on self-esteem and sexuality awareness, in part as prevention against precocious and unsafe sexual behavior. And by high school all students should have an opportunity to explore career options as a means of avoiding the aimlessness and identity struggles that can result from a lack of connection to meaningful career directions.

Despite the thoughtfulness of early developmental guidance models, the practice of school guidance largely has been reduced to monitoring student progress in order to obtain academic support or mental health treatment where needed. At the high school level it also consists of helping students select courses and apply to college or vocational training programs. Although these tasks are important, the guidance counselor's role has been stripped of many of its developmental and primary prevention functions. As a result, where primary prevention exists

in public schools it often is provided by outside programs or partnering organizations. Violence prevention programming provides one of the clearest examples of outside agency involvement in United States schools. As it became clear that violence in its many forms was touching the lives of students across all social strata, violence prevention became a primary prevention activity: it was being target toward all students, not just those with a history of fighting or victimization.

SECONDARY PREVENTION

When prevention efforts are applied to at-risk students, they typically are secondary prevention initiatives. Secondary prevention refers to those approaches that target students who do not necessarily show any of the signs or symptoms of the problems being addressed, but who are deemed to be at particular risk for experiencing those problems in the future. For example, children living in highly impoverished and violent neighborhoods are at higher risk for subsequent fighting and victimization than those living in less violent neighborhoods. High-intensity violence prevention programming might be provided to students in the schools of such communities; this would be a form of secondary prevention due to the high-risk nature of the population.

Many early childhood programs that are labeled "early intervention" approaches are actually secondary prevention initiatives. The widely implemented Head Start program provides one of the best-known examples of secondary or targeted prevention. Its pioneering founders Edward Zeigler and Julius Richmond conceived of Head Start as an ambitious attempt to provide poor parents and their children with the school readiness skills necessary for early educational success. Because the majority of poor and low-income parents do not have the educational training or the material resources to adequately prepare their children for formal schooling, many students of such families fall behind early, become frustrated, and consequently lose interest in school. Head Start was conceived as a targeted effort to reduce the likelihood that these school-based problems would occur or become seriously compromising. The research on Head Start showed that although it was effective in helping to level the playing field in the early elementary school years, its benefits were often lost over

time. That is, students from high-risk backgrounds often succumbed to their risky living conditions if not provided with consistent educational and social support well into their formal education years.

Mentoring and afterschool programming are two additional examples of secondary prevention. The psychologists Jean Rhodes (2002) and David DuBois (DuBois, Holloway, Valentine, and Cooper 2002) have conducted important research on the effectiveness of youth mentoring as a preventive intervention for at-risk youth. Building on a seminal finding from the resilience literature that one strong relationship with a non-parental adult helps youth build resilience, Rhodes (2002) and host of other researchers (DuBois and Karcher) have studied both formal and natural mentoring relationships as contributors to resilience and healthy development. Formal youth mentoring is defined as a one-to-one relationship between an adult and a child or adolescent. Typically, the youth participants are deemed to be at-risk either by virtue of being raised in a single parent, low-income family, because they are struggling in school, or because they live in a community marked by poverty or violence. The adult mentors tend to be volunteers who are not trained in a child development, mental health, or education field. Given who the mentors are, most mentoring approaches take on a "nonprofessional" orientation, with a focus on mutually interesting recreational, artistic, or educational activities. The primary purpose of the activities is to help build a strong relational bond, which can be experienced as a source of support in the face of everyday stress.

Although the research on formal mentoring has shown somewhat mixed results, Rhodes and her colleagues have shown that mentoring relationships are commonly experienced by youth as positive and supportive when the relationships last at least one year, when the mentoring match meets at least twice per month, and when the mentor is viewed as flexible, kind, and firm rather than rigid and "agenda-driven." In those cases where the relationships are viewed as positive, youth are more likely to show subsequent signs of thriving both academically and socially. In an extensive critical overview of the youth mentoring research, DuBois et al. (2002) concluded that mentoring is indeed an effective preventive intervention for at-risk youth when the conditions are right. The right conditions include adequate training and

supervision for the mentors, thereby increasing the likelihood of meeting consistency, match longevity, and, importantly, the capacity to effectively link the mentoring relationship with the child's home and school life. As the mentor builds bridges between the match and other contexts, the larger support network is enhanced thereby providing a more coherent web of resilience-building relationships.

Afterschool programming also builds on the resilience research showing the importance of supportive relationships for at-risk youth. Because so much of violence and related antisocial activity occurs immediately in the hours following the school day, afterschool programs became seen not only as supportive educational opportunities for students at risk for school failure, but also as social development contexts for students at risk for community violence and related problems. Although the afterschool movement is now booming, the research in this area is even more mixed than it is for mentoring. The lack of definitive findings on afterschool programming largely is due to the fact that there is less coherent theory guiding efforts in this area. Some programs are highly structured and educationally oriented, whereas others are less structured and recreationally oriented. Despite the unclear results, educators and youth development advocates clearly are sold on the general notion. The good news here is that innovative models are continuously being developed, with new research models being designed to study the benefits of these newly emerging approaches.

TERTIARY PREVENTION

Interventions designed to prevent existing difficulties from becoming more severe constitute tertiary prevention approaches. Whereas secondary prevention targets students at risk for negative outcomes, tertiary prevention targets those who are beginning to manifest precursors or symptoms of the targeted problems. Students who are failing in school and have chronic absenteeism problems, for example, are often targeted for dropout prevention approaches. Such students have moved beyond risk for the problem and are already showing symptoms associated with its occurrence. Similarly, students who get in fights in school are recruited for targeted conflict resolution programs such as mediation training. These programs are not only designed to address existing

difficulties, but also to prevent the escalation of these early difficulties into larger, more complex problems.

Tertiary prevention can exist very early in the life cycle and programs often are implemented in the earliest grades of formal education. The risk factors entry of this chapter outlines many of the risks associated with negative outcomes. In some cases those risks are problems in and of themselves, and are predictive of more serious problems in the future. A clear example is early reading difficulties. Risks for these difficulties include neurological impairments or injuries, along with low levels of parental literacy, and inadequate early education. But these reading problems themselves are predictive of more severe academic delays. Therefore, early intervention into the problem serves as tertiary prevention for more substantial academic impairments. Intensive literacy interventions in preschool and the early primary school years are correlated with higher academic achievement and lower educational difficulties in subsequent years. This improved academic achievement, in turn, serves as a protective factor against other social and behavioral problems.

In general, the earlier interventions are introduced and the more intensively they are implemented, the more likely it is that they will serve a preventive role in reducing substantial, longer-term problems. This principle holds in the academic and social development realms alike. As presented in the resilience mechanisms entry, the development of competence in any number of domains builds strength that helps counteract the stressors of daily life, including the stresses associated with existing problems. Because the development of competence is a complex, ongoing, interactive process, the earlier it begins and the more fully it is supported, the more likely it is that the particular competence will be developed successfully. And the more highly developed the competencies across different functional domains, the more powerful is their preventive influence. Not only does early competence beget later competence (success builds success), but early and sustained competence counteracts problems as well (success helps prevent failure).

The counseling and developmental psychologist Michael Nakkula and his colleagues (Nakkula and Ravitch 1997) have developed a tertiary prevention approach for primary, middle, and high school students. Called Project IF (Inventing the Future), this

approach works with students referred for traditional counseling services within the schools, but rather than providing remedial interventions, the project begins with a strengths and interests assessment and focuses on the development of those areas over the course of one or more academic years. This model is appealing to students because of its positive orientation. It allows students who typically are identified for their problems to receive support and encouragement in the development of their skills and interests. At its core, Project IF is a competency-building approach for students already manifesting the difficulties that place them at high risk for school failure and dropout. Nakkula and his colleagues have shown how the Project IF model sustains students' interests in receiving multiyear support, and have outlined multiple implications for identity development derived from their approach. For school practitioners, the model is attractive because it utilizes a traditional counseling framework (students are referred to receive individual or group support), while offering a more positively oriented intervention that is consistent with recommended directions in the fields of psychology and youth development.

ELEMENTS OF SUCCESSFUL PROGRAMMING

In an important summary of existing research on risk factors and successful prevention programming, writers Lisbeth and Daniel Schorr (1988) articulated a list of best practices that largely fall within the category of secondary prevention; that is, they target at-risk populations. At the top of their list they prioritized interventions that provide family planning support for poor and low-income teens. This would occur through addressing the needs and interests of youth so that they feel a stake in their own futures. The birthing of unwanted children, according to Schorr's review of the research literature, leads to a host of problems for those children and the young women who raise them. Family planning is best conceived of as a form of secondary prevention; it targets youth who are deemed to be at risk for early and unwanted pregnancy. Large urban school systems have sporadically engaged in such prevention work, but local and national politics related to the discussion of sexuality in schools—particularly discussions that are not abstinence-based exclusively—

has led to inconsistent use of such approaches.

Schorr and Schorr (1988) also cited the importance of public health approaches that provide enriched forms of prenatal care, thereby preventing or reducing the likelihood of poor health and malnutrition. For a long time, malnutrition and other basic healthcare needs went undiagnosed in efforts to understand the early educational failures of poor and low-income children. Addressing these basic needs, according to Schorr, would reduce the need for other, more complicated interventions. In what would be most accurately described as a blend of secondary and tertiary prevention, Schorr argued the need for more widely available interventions that provide intensive social and family support for neglected and abused children. She found that interventions often are provided for the symptoms of such problems without ever acknowledging the underlying family difficulties. Without addressing these core problems, educational and other remedial efforts are doomed to failure.

Finally, Schorr argues that high quality preschools, child care, and elementary schools can help children to acquire the skills necessary to becoming independent and productive. In short, she argues for a host of early preventive interventions for at-risk populations, primarily those that are poor. As the lessons from Head Start suggest, however, even successful early interventions do not assure long-term success. It has become progressively clearer that the higher the risk the more intensive and sustained must be the intervention approaches. Good education, for example, cannot stop at the end of primary or middle school. Similarly, high quality prevention and intervention services for high-risk populations must continue throughout the developmental spectrum. Resilience researchers and developmental specialists concur that it is critical to simultaneously attempt to ameliorate risk factors and enhance competencies and related protective mechanisms. Doing so requires careful interdisciplinary collaboration.

As researchers from diverse disciplines have shown, eradicating hunger and malnutrition, addressing vision problems, and intervening in child abuse, for example, are critical prerequisites to successful efforts in supporting cognitive and social competencies in the primary school years and beyond. Nurses cannot do this work on their own; neither can teachers, counselors, or parents. The psychologists Martha

Burt, Gary Resnick, and Emily Novick (1998) have poignantly shown how broader community supports are needed to enhance the development of at-risk children and youth. They emphasize the integration of services in a manner that links schools with families and the larger community. Integrating services within schools is inadequate, they find, given the influential roles of parents, peers, and community factors on students' development. The critical challenge, as the authors points out, is not in determining how best to provide integrated, comprehensive support for youth, but in building the societal commitment to fund such efforts. Focusing on academics alone is efficient and cost effective, but in the case of those students who are at greatest risk for academic failure due to psychological and social challenges, such efficiency is both educationally and developmentally ineffective.

A great deal of research has converged on the finding that holistic interventions that deal with multiple factors, contexts, and levels (individual, family, community) are more effective than those that focus exclusively on one variable, aspect, problem area, context, or level. Similarly, the earlier such comprehensive approaches begin, the greater is their positive impact on multiple facets of development including juvenile delinquency, teen pregnancy, and unemployment in young adulthood. The psychologist Ann Masten (Masten and Coatsworth 1998; Masten and Reed 2002), whose work is presented in the resilience mechanisms entry, summarizes comprehensive prevention work as being (1) risk-focused, with an emphasis on eliminating, preventing, averting, or reducing targeted risks; (2) resource-focused, with an emphasis on providing the critical health and educational resources required for successful coping and development, and (3) process-focused, with an emphasis on influencing the adaptation systems (individual, family, and community) that are tied to competence, relational attachment, self-efficacy, and behavioral self-regulation. While there is little debate within the prevention field over such comprehensive approaches as that articulated by Masten, such clearly articulated approaches rarely survive due to cost, commitment, and management challenges.

In the entry that follows, a comprehensive model for building developmental assets is presented. This model assumes a community-wide commitment and

provides a clear research-based framework in support of its approach. Perhaps most importantly, the model is being widely tested at the community level for cost and commitment sustainability.

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DEVELOPMENTAL ASSETS: FROM PREVENTION TO PROMOTION

Developmental assets are the fundamental nutrients—strengths, skills, and supports—young people need to be healthy and vibrant, both in the present and in the developmental transition toward adulthood. Just as childhood difficulties, particularly severe forms of psychopathology, serve as strong precursors to subsequent adjustment problems in adulthood, childhood strengths are important predictors of adult well being. But because childhood and adult dysfunction often create a pronounced disturbance in the surrounding environment, “problems” have captured the attention of service providers and professional youth practitioners, while youth strengths and attributes have gone largely unexamined. The end result is that child and youth development professionals, other than teachers, have learned much more about problem remediation and prevention than about the promotion of optimal child, youth, and adult development.

This emphasis on deficit reduction and prevention, and relative lack of focus on strength-based development, has been severely challenged over the past fifteen to twenty years. The field of psychology has embarked on what is now called the “positive psychology movement,” which is an organized effort to infuse resources into research, practice, and theory-building approaches devoted explicitly to the development of health, well being, and optimal human functioning. The emerging field of youth development is now organizing almost exclusively around positive development tenets and practices. The developmental assets framework is a product of this climate. It is an effort to organize, deepen, and implement existing strength-based developmental knowledge.

Although the term “developmental assets” is at

times used generically in reference to the strengths or attributes people possess, it is most commonly linked to the specific research and implementation model or framework developed by the Search Institute in Minneapolis, Minnesota, under the leadership of youth development scholar and advocate Peter Benson. Search Institute’s Developmental Assets Framework is an organized categorization of internal characteristics (internal assets) required for healthy development, and external supports (external assets) needed to cultivate those characteristics. Overall, the framework presents forty essential assets: twenty internal and twenty external, with both of these primary groupings divided into four more specific clusters (Scales and Leffert 1999).

FROM TREATMENT TO PREVENTION

The movement toward a developmental assets or positive psychology approach to child and youth development has evolved through clearly detectable steps within the social sciences and related applied disciplines, such as education, counseling, and social work. The impact of psychoanalysis in the early twentieth century, and subsequent psychodynamic approaches to understanding the mind, served a dual role in organizing the mental health fields around mental illness, or psychopathology: it promised access to the long-hidden mysteries of the mind, and it held out genuine possibilities for reducing mental anguish. Psychoanalysis was conceived by Sigmund Freud as a means of unlocking those mysteries of the mind that lead to distortions in mental functioning—distortions in everyday behavior as well as distortions that influence behavior in maladaptive and sometimes bizarre ways. The early documented successes of psychoanalysis in treating particular psychological problems, aided by Freud’s unique gifts of insight and writing skill, spurred on the enormous popularity and influence of his intrapsychic approach, and led to the broader practice of psychotherapy. Through a singular stroke of genius, it seemed, Freud had unlocked fundamental mysteries of the mind, and created a new “talking cure” for mental illness. Although innumerable variants of psychotherapy have emerged over the past one hundred years, they have shared one common core: they have been designed to treat individual or social problems (Seligman and Csikszentmihalyi 2000).

As the fields of psychiatry and psychotherapy advanced, early intervention emerged as an effort to treat problems before they were exacerbated into full-blown pathologies. Just as psychiatry grew out of the field of medicine and emphasized diagnosis and cure, various forms of psychotherapy grew from their respective disciplines—such as psychology, social work, and education or learning theory—and the characteristics of those disciplines. Psychology-based psychotherapy, for example, drew from studies of human behavior and perception to create alternative therapy models. Behavior-based studies showed that behavioral patterns—both healthy and unhealthy—could be shaped dramatically by systematic forms of reinforcement. Similarly, studies of perception showed that human interpretations of reality could be as powerful as objective experiences in shaping certain forms of social behavior and emotional adjustment. Such findings from psychology and related disciplines led to forms of therapy that targeted early symptoms of pathology rather than addressing full-blown psychological problems. These breakthroughs in behavior modification therapy and cognitive behavioral therapy carried important implications for working with children and adolescents. If psychotherapy could target symptoms in children before they developed into adult psychopathology, more extensive forms of human suffering might be prevented. In this sense, early intervention into identifiable problems served as a bridge to what later became known as problem prevention.

The field of problem prevention emerged largely from the discipline of public health. Whereas early intervention typically uses counseling and psychotherapy to target symptoms before they escalate into full-blown problems, prevention uses educational strategies to prevent problem development. To briefly summarize material from the prior entry primary prevention targets general populations in an effort to prevent particular problems from emerging. For example, because smoking and drinking are associated with health problems for a broad range of the population, these issues have been common targets of primary prevention efforts in the public schools. Rather than targeting high-risk subgroups of students, primary prevention targets entire populations. Secondary prevention, on the other hand, is aimed at subgroups of students or other people who are deemed to be at particular risk for

a specific problem. Students who are failing school are deemed to be at risk for subsequent dropout. Therefore, dropout prevention programming targeting these students is an example of secondary prevention. Tertiary prevention is aimed at preventing already existing problems from getting worse. To stay with the same example, students failing in school might be recruited for an academic improvement program designed to improve their grades. The goal here is not to prevent dropout *per se*, but to prevent further decline in academic performance; the problem already exists and the goal is to prevent it from continuing or getting worse.

Treatment or remediation, early intervention, and prevention are three related and varied approaches to addressing student problems. The movement from treatment to prevention emerged from a desire to address problems before they emerged or became severe. The commonality across these approaches is that they are all problem or deficit oriented. The most recent shift in student and youth development is the move from problem to possibility, or to a strength-based orientation. The developmental assets framework is part of this shift.

FROM PREVENTION TO POSITIVE DEVELOPMENT

Whereas prevention is designed to keep bad things from happening, positive development is explicitly designed to bring about good things. Long-time leaders within the field of psychology, in particular, have recently called for the investment of intellectual and financial resources into the study of positive, healthy, and optimal development. Positive development is generally viewed as developmental functioning that brings about constructive or desired ends. For example, skill development in different domains brings about successful performance in music, sports, academics, and other areas. Healthy development, as a form of positive development, generally refers to behaviors associated with positive mental and physical health. Just as living in highly stressed environments can contribute to mental and physical deterioration, living in highly nurturing environments can bring about positive self-esteem and good physical health. Finally, optimal development refers to the behaviors associated with those exceptional achievements that only occur through sustained ef-

fort. According to many psychological researchers, we know much more about the sources and escalation of pathology, and much less about the dynamics that yield positive outcomes, such as healthy and optimal functioning.

As a result of the call for more investment in positive development, many new initiatives have emerged over the past ten to fifteen years. Rather than strictly examining the antecedents to school failure and dropout, for example, more research is now focused on the processes that lead to school success and exceptional achievement. A goal of this research is to uncover common methods for supporting successful school and related student behavior, so that these goals can be integrated into schools across the country, as well as globally. Two related phenomena—resilience and developmental assets—have become central to the positive development movement and are the focus of a great deal of student support reform efforts in U.S. public schools.

RESILIENCE AND DEVELOPMENTAL ASSETS

As discussed in an earlier entry of this chapter, resilience emerged from studies of risk, and is conceptualized as the processes or mechanisms through which children and adults respond to crisis, trauma, and chronic challenges to healthy development. As the resilience research grew over the past thirty years, practitioners as well as researchers became interested in the implications of this concept. Applied questions began to emerge. For example, are there particular aspects of resilience that can be promoted by clinicians, educators, parents, and other caring adults? Can individual resilience responses be identified and nurtured in practice? Can schools and communities be organized in ways that cater to and promote resilience? Questions like these, combined with the growing psychological research on resilience and related health-promoting processes, led to the concept of developmental assets.

Particularly instrumental to the emergence of the developmental assets concept was the notion that resilience should not be conceived of strictly as an individual trait or characteristic. The notion of resiliency suggests that the properties of resilient behavior are traits or characteristics of people, rather than active processes or mechanisms that emerge through

individual interactions within their environments. Two psychologists, Norman Garmezy and Michael Rutter (1988), pioneered research that showed how resilience is best understood as an interactive process rather than an individual trait. This is not to say that resiliency, as an individual trait, does not evolve through interactions within one's environment. But the research of Garmezy, Rutter, and others shows that although particular biological characteristics can contribute to the development of resilience, all people have the capacity to form more or less resilient responses to their environments.

The developmental assets framework, described in detail below, drew from this conception of strength emerging through individual-environmental interactions and explicitly articulated both sides of the coin: the individual and the environmental. Accordingly, developmental assets have come to represent the inner strengths that individuals develop and the external supports needed to promote that development. This two-sided coin is an effort to bring the resilience literature into the hands of practitioners who are eager to promote positive development within their communities. By defining and naming the inner strengths and external supports found in the resilience-related literature, the developmental assets provide a language that practitioners can use as they articulate the goals and implement the strategies for their work.

DEVELOPMENTAL ASSETS AS SOCIETAL INVESTMENT

The investment language implied in the term “developmental assets” is intentionally constructed to convey two related meanings. The first intent is to differentiate the asset approach from the deficit or problem-based models of human development discussed previously. The more we study and respond to deficits the better we understand them, and the more oriented to them we become. The same logic holds for assets. The architects of the developmental assets model were proponents of a youth advocacy-based political agenda. Their goals included changing the primary orientation toward youth from a deficit- to a strength-based perspective, and thereby altering the approaches through which youth development practice and applied research is organized.

The second intent is built upon the first. If the

orientation toward youth can be shifted toward a strength-based approach, and youth become viewed as community resources versus community problems, then perhaps national and international policy can be created to promote this valued resource. This clearly capitalistic language—a language of investment and resources development—is designed to reach across the political divides by bringing investors of all types into the business of promoting youth development. Such development is not only in the interest of children, youth, and their families, but it also is in the best interests of our communities, our country, and our world. If our youth are our future, including our future workforce, then it is in everyone's interest to cultivate that resource fully. This mindset attempts to extract youth development responsibility from the exclusive domain of parents, educators, and professional practitioners, and make it the responsibility of all those who serve to gain from the health and productivity of our young people.

THE DEVELOPMENTAL ASSETS FRAMEWORK

As discussed briefly above, the developmental asset framework is an effort to organize the resilience-related research into a usable model for practitioners and applied researchers. Unlike basic researchers who study issues for the purpose of advancing a particular branch of scientific inquiry, applied researchers study the impact of particular phenomena, processes, and interventions on issues that affect targeted outcomes. Applied educational researchers, for example, study the impact of pedagogical or curricular modifications on learning outcomes. Applied developmental researchers study the impact of new youth programs on participants' attitudes, behaviors, and targeted experiences. Whereas evaluation research examines the relative success of programmatic initiatives and the processes that lead to such success, applied research is less focused on success and failure per se, and more focused on the nature or experience of the processes and outcomes associated with programs or related initiatives. In addition, applied research often is focused on specific aspects of interventions and their impact on participants rather than examining overall success or failure.

Just as the developmental assets framework is designed to provide a much-needed strength-based lan-

guage for practitioners, it also helps applied researchers focus on aspects of development that are relevant to practitioners. In this sense, the framework serves as a bridge between applied research and developmental practice. It allows both sets of professionals to speak a common language, and focus on related phenomena.

As noted previously, the developmental assets framework is divided between external and internal assets. After thoroughly reviewing the resilience-related literature, the architects of the framework settled on twenty external assets that they could clearly identify and define, and twenty internal assets. Clearly, the reality of the literature is not so symmetrically organized, but the authors decided to present their findings in a format that could readily be digested and utilized. If they had provided a more finely differentiated synthesis, the framework would be more difficult to fully comprehend and utilize. If they provided a less differentiated framework, it would have been too crude and superficial to be useful. In this sense, the framework is a compromise between research rigor and practical utility.

EXTERNAL ASSETS

As described above, the external assets are those social and environmental factors that nurture healthy development. The developmental assets framework includes four basic clusters of external assets: (1) support, (2) empowerment, (3) boundaries and expectations, and (4) opportunities for constructive use of time. For educators working with all youth, including those at highest risk for negative outcomes, an understanding of these external asset clusters may serve to organize strategies for effective teaching and development.

The support asset cluster emphasizes the supports youth can receive from family and community resources, particularly through close, caring relationships. In addition, supportive relationships with nonfamilial adults have been found in numerous studies to be important to nurturing healthy development among at-risk youth. Of the six assets constituting the support cluster, two are school specific: caring school climate and parent involvement in schooling. A great deal of research has shown how critical a caring school climate is to the promotion of inner strengths, including an internalized desire to achieve

academically and to become successful in the future. Research has also found parent involvement in their children's schools to be an important environmental support. The linking of two key contexts, home and school, creates a strong support network for students, and is especially important to those students who are most vulnerable.

The empowerment cluster consists of four assets that contribute to youth feeling a sense of efficacy in their lives and in the world. The first empowerment asset is the valuing of youth by adults in the community, including the school community. Youth who genuinely feel that they are valued by parents, teachers, and other adults are more likely to grow healthily and experience success than those youth who feel devalued. While virtually all educators understand this phenomenon, struggling students repeatedly report feeling devalued by teachers. The next two empowerment assets are interrelated: youth as resources, and youth as service to others. When youth are viewed as resources and given important roles in their schools and communities, including roles that allow them to be of service to others, they are more likely to build a sense of self-worth. Finally, the provision of a basic sense of safety is critical to helping youth feel empowered to act with a measure of purpose in their schools, families, and communities. Building safe schools is essential to creating opportunities for youth to feel valued, to be used as important resources, and to be of service to others. In that sense, safety is a cornerstone of the empowerment assets. Without a safe beginning point, it is virtually impossible to move forward confidently.

The boundaries and expectations cluster is composed of six assets, one of which is called school boundaries. It suggests that schools must provide clear rules and consequences in order for students to function in an organized manner that increases the likelihood of school success. Disorganized schools are particularly troublesome for students who are in high need of structure, such as those with learning disabilities and anxiety disorders. Adult role models is another asset within this cluster. Teachers, along with parents, are especially important candidates in this area, as they have the daily opportunity to model responsible adult behavior. Positive peer influence is important as well. Specifically, peers become especially strong social and academic influences as students reach middle

and high school. The nature of peer interactions, then, holds important implications for school success and social functioning. Finally, high expectations are essential to success in all arenas. For struggling students, it is critical that support is provided and expectations are not lowered. Without high expectations and ample support students are likely to descend to the lower level of expected functioning.

The last external asset cluster—constructive use of time—includes two assets particularly relevant to school: creative activities and youth programs. Creative activities, such as music, theater, and the arts, are important to cognitive development and to the cultivation of broadly educated citizens. The decline in opportunities in these areas, particularly in poorer school systems, is devastating to those students who may struggle in other areas but show a strong inclination toward the arts. Similarly, youth programs such as sports, clubs, and afterschool programs provide opportunities to build a variety of skills, including social and leadership skills. An additional asset in this cluster, time at home, also is affected by school. While it is not the school's responsibility to structure time at home, the nature and quality of homework is critical in this arena.

The external assets are best understood as an environmental or social network. Although family, community, and school are individual contexts, they also are interrelated. In that sense, the external assets need not be considered separately but as a larger gestalt. Each part of this gestalt affects the others. Safe, supportive, and creative school environments engage students in ways that influence the other environments in which students function. So while schools should not be overly blamed for the multitude of psychosocial as well as educational challenges students face, educators must also fully comprehend the power of their roles in influencing the lives of their students. Understanding the ramifications of the external assets can help cultivate that comprehension.

INTERNAL ASSETS

Like the external assets, the internal assets are divided into four basic clusters. The first cluster, commitment to learning, reflects the attitudes and behaviors that students need to grow educationally.

Achievement motivation captures the desire to perform well in school. This desire is highly related to school engagement, or the experience of being actively engaged in the school-based learning process. Students found to have adequate levels of achievement motivation and school engagement are more likely to report a consistent commitment to doing their homework, and a positive feeling of connection (bonding) to school. Daily homework, school bonding, and reading for pleasure all have shown strong correlations with positive development within the educational arena, but also with prosocial development more broadly. A commitment to learning tends to signify a commitment to healthy development in general.

The second internal cluster, positive values, is composed of six interrelated assets. Caring reflects the value young people place on helping or caring for other people. The capacity to care for others is highly correlated with one's own level of support, and in that regard a caring young person tends to depict one who herself is well cared for. Equity and social justice is strongly correlated with caring, and captures an interest in reducing social inequities, hunger, and poverty. Integrity represents the capacity and willingness to stand up for one's own beliefs, even when under pressure to do otherwise. This asset is often paired with honesty, or the young person's willingness to tell the truth, even when it is not easy to do so. Responsibility and restraint are the final two assets in the positive values cluster. The former captures the willingness to take responsibility for one's own actions, whereas the latter depicts the belief that it is important not to be sexually active or to use alcohol or drugs. Although this final asset sounds more like a value judgment than a research finding, results from adolescent development studies have been clear that restraint, as defined here, is associated with a host of other positive outcomes.

The third internal cluster, social competencies, includes five basic social skills that have received the clearest research support to date. Planning and decisionmaking captures the young person's ability to plan ahead and make choices consistent with such plans. This competency is highly related to growth in cognitive development during adolescence and to an emphasis on future orientation, which, in turn, requires skills in impulse control or self-regulation. Interpersonal competence reflects the development

of empathy, sensitivity, and related skills required for making and sustaining friends and ultimately romantic partners. In a diverse society such as the United States, cultural competence is an essential skill, reflecting the knowledge, comfort, and willingness necessary to effectively interact with people of backgrounds different from one's own. Resistance skills have been widely studied through resilience research, with studies clearly showing that the ability to resist negative peer pressure is instrumental to sustained, healthy development. Finally, peaceful conflict resolution skills allow youth to resolve conflicts without undue escalation, thereby preventing harm to self and others. Such skills not only allow for healthy and safe self-development but also contribute to the cultivation of safer, more peaceful communities.

Positive identity marks the final internal asset cluster. The cluster largely depicts the synthesis of the other internal and external assets. As youth are supported externally in the development of internal strengths, they inherit a positive view of themselves and their place in the world. A feeling of personal power, or the belief that one has control over her destiny, is central to this experience. Self-esteem is perhaps the most well known of the identity assets, and simply reflects a positive feeling about one's self and one's accomplishments. Having a healthy sense of personal power and self-esteem allows one to develop a clear sense of purpose in the world, which reflects the healthy antidote to the popular identity confusion phenomenon that has been so widely studied among adolescents. And, ultimately, all of these identity features facilitate a positive view of one's personal future. More commonly referred to as "future orientation" in the adolescent development literature, the capacity to have a positive view of one's future has repeatedly been linked with a wide range of healthy outcomes.

In combination, these eight asset clusters—four external and four internal—represent a comprehensive overview of the resilience and positive development literature. Following their synthesis of this literature, Peter Benson and his colleagues at Search Institute have studied the extent to which these assets are found among populations of youth across the country. Based on outcomes from this research they have spawned a national movement designed to put the developmental assets framework into action (Lerner and Benson 2002).

STUDYING AND CULTIVATING DEVELOPMENTAL ASSETS

Through surveys administered across the country to thousands of youth, Search Institute discovered a convergence of important and startling findings. On the positive side, strong inverse correlations were found among the developmental assets and high-risk behavior. Specifically, the more assets reported by youth, the lower their self-reported level of risk-taking behavior in the areas of heavy alcohol use, drug use, violence, and sexual activity. Just as positively, strong positive correlations were found between the developmental assets and leadership behavior, school success, health maintenance, and the valuing of diversity (Scales and Leffert 2004). In short, the picture is very clear: developmental assets are highly associated with a range of prosocial behavior and disassociated with a range of risk-taking behavior.

What is startling, however, is that less than half of the students across the country experience a majority of the assets. Sixth through twelfth graders average 19.3 assets total, out of the forty possible, with 56 percent of them averaging less than half of the assets. Only 9 percent of students nationwide report thirty-one assets or more. Given the fairly basic nature of the assets, researchers originally assumed that the majority of youth nationally would experience the vast majority of the assets. That clearly has turned out not to be the case. To make matters worse, the asset totals systematically decline as youth get older, with twelfth graders reporting substantially fewer assets than sixth graders (Scales and Leffert 2004). This finding coincides with independent research that shows systematic declines in adolescent prosocial behavior over time. In other words, youth report feeling under-supported and progressively less engaged in prosocial behavior throughout the middle and high school years. This pattern is especially robust for youth living in poor and dangerous neighborhoods where the quality of schooling is particularly inadequate.

In response to this rather grim profile, Search Institute initiated the Healthy Communities–Healthy Youth (HC–HY) Initiative in an effort to promote the cultivation of developmental assets among youth nationwide. Since 1997 approximately six hundred communities across the country have joined the initiative, which means they have committed to focusing on at least three

of the developmental assets and have involved at least three community sectors in an effort to cultivate those assets in their young people. One of the primary goals of HC–HY is to make asset building a community priority rather than a professional one only. In this vein, the HC–HY initiatives work to involve sectors such as the police force, business, and the faith/religious community in asset building, rather than rooting the work strictly in the education, youth development, and human service sectors. This national movement has grown widely over the past seven years, with innovative models cropping up across all fifty states.

Counseling and developmental psychologists Michael Nakkula and Karen Foster of the Harvard Graduate School of Education have partnered with Search Institute's Director of Applied Research Marc Mannes and his colleagues as external evaluators to examine the impact of these community initiatives (Mannes, Lewis, Hintz, Foster and Nakkula 2002). This "internal/external" team has utilized an in-depth ethnographic approach to study the work of eight communities from different regions of the country. Their findings show that each initiative tends to work especially well with particular sectors and struggle somewhat more with others. Some, for example, work systematically with schools to promote asset development within the school setting. These initiatives bring outside partners into the schools, including police officers and business partners, and organize this work explicitly around asset-building approaches. Others work more closely with the business, faith, and youth development sectors and tend to locate their work outside of the school building. Whatever the emphasis, however, all of the HC–HY initiatives struggle to keep funders committed to such a broad-based mission as community-wide asset building, and all of them are dependent on a combination of strong, wise leadership and deep grassroots involvement.

Only now, after several years of implementation, are the HC–HY initiatives beginning to see improvements in their reported levels of developmental assets. Still, however, large numbers of youth in these communities are not yet reached by the initiatives, and that gap in support services has become a focal point of more recent efforts. In fact, it seems clear from the Harvard-Search Institute study (Mannes et al. 2002) that the developmental assets approach quickly reaches youth who are most reachable, while the harder-to-reach, more at-risk youth continue to

be engaged by prevention and remediation services. Perhaps as a result of this, the HC–HY communities are beginning to develop blended models of support in which approaches to cultivating developmental assets are built into primary, secondary, and tertiary prevention programming. These blended models represent some of the most comprehensive efforts to date for reaching a wide range of youth through a diversity of support services.

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RISK AND RESILIENCE AMONG IMMIGRANT STUDENTS

Globalization, defined by historian John Coatsworth (2004) as the accelerated and growing movement of people, goods, and services, or ideas among countries and regions, is one of the most significant phenomena of our time. It is transforming political and social landscapes around the world, and is altering the experiences of youth and adults alike. As one of the most significant components of the globalization trend, international migration presents immense challenges to governments, families, school systems, and students. This is especially true for industrialized countries, the destination for large numbers of immigrants. The 2000 census reported 32.5 million foreign-born people in the United States, equivalent to 11.5 percent of the total population. While immigration to the United States is not a new phenomenon, there have been significant changes both in the type and the magnitude of the immigration influx over the past hundred years. As reported in the census (Schmidley 2003) the number of foreign born in the United States grew by 57 percent in the last decade of the twentieth century. And while in the 1920s the first large wave of immigrants came mostly from European countries, most immigrants now come from Latin America or Asia.

MIGRATION: GLOBALIZATION AND DIVERSITY

Immigrants today come with similar expectations, optimism, and willingness to work hard as did their

counterparts from the early 1900s. However, current immigrants are met with a different reception. The American labor market has assumed what economists refer to as an “hourglass” configuration: as the middle narrows, the majority of the workforce either is pushed toward the upper realm of the economy, where occupations increasingly require a high level of education, or downward into a market dominated by menial jobs. Immigrants in past eras, many uneducated and poor, often managed to climb the social and economic ladders through blue-collar jobs, assimilating into the American culture as they moved along. In contrast, present-day assimilation and upward mobility can be more challenging. An increasing number of immigrant racial minority groups face racism and discrimination in various forms, making it difficult for them to follow the steps of prior newcomers, most of whom were white Europeans.

Researchers agree that the future prospects of immigrants depend on many different factors, such as reasons for emigrating (forced versus voluntary), the context of reception (labor market, perceptions of racism and discrimination), families’ resources (socioeconomic status and educational experiences), and the characteristics of their new communities (integrated and supportive communities versus segregated or isolated ones). There is no longer one primary path to incorporation, but rather a diversity of pathways, some of which are conducive to success while others lead to marginalization, depending largely on the aforementioned exit and entry situations.

A great deal of diversity exists even within immigrant families, where children and adults can experience immigration in vastly different ways. Immigration is a major life transition that presents children and adults with particular tasks and challenges that practitioners and policymakers must consider carefully. In the case of education, many regions are currently faced with a large influx of immigrant children, making it necessary for schools to make adjustments in order to successfully educate all children. The school experience plays a much larger role than it did previously in helping or hindering newcomers in their efforts to be successful. It is, therefore, imperative for those involved in educating immigrant children to understand the circumstances that affect such a significant portion of their student population. Even more importantly, educators must

recognize the ways in which some immigrant factors can place these children at risk while others can become a source of strength.

Common reasons for immigration include reuniting with family members, seeking better job opportunities, escaping violence, or furthering education. In the United States, immigrant families historically have settled in major cities, such as New York, Miami, Los Angeles, and Chicago where they have networks of relations, either family or friends. Increasingly, however, immigrants are settling in places without a strong history of immigration, but which have become attractive destinies due to job opportunities, thus creating a necessity for these communities to adjust to the needs of newcomers.

There also is variation in migratory status. Some immigrants come to the United States with legal status as family members of naturalized citizens seeking reunification; as either skilled or nonskilled workers promoted by certain policies or quota systems, such as the case of professionals from India and Eastern Europe who provide technological skills; or as political refugees. Others come without legal status, also representing a diverse group ranging from unskilled workers to professionals. Undocumented immigrants are especially vulnerable to exploitation and discrimination, and often have the most difficulty accessing social services and making a living wage. Furthermore, the events of September 11 have dramatically changed the situation of many immigrant families, both documented and undocumented, who are fearful of and discouraged by the attitudes and policies resulting from increasing concerns about terrorist activities in the United States.

The socioeconomic backgrounds of the immigrant population in the United States fall into a bimodal distribution. Marcelo Suárez-Orozco and Mariela M. Páez (2002), immigration scholars, have pointed out that immigrants are among the highest educated and most skilled workers in the United States in certain respects. For example, they are overrepresented in the group of people with doctorates. In other respects, immigrants tend to be among the least educated. The Statistical Profile on the Children of Immigrants by the National Center for Children in Poverty (2002) has estimated that one in every four poor children has at least one parent who is an immigrant, and that this group's prospects of remaining poor throughout their lifetime and un-

dergoing hardships are very high. This statistic speaks volumes when one considers that at least one in five children in the United States is either an immigrant or the child of an immigrant.

Sociologist Min Zhou (1997) claims that immigrants constitute the fastest growing and most ethnically diverse segment of the student population. Like their parents, children come from various socioeconomic backgrounds. Some will be the children of educated, professional parents, while others will come from poorly educated, low-income families. They will certainly present a variation in native language spoken, and the extent to which they speak English. The New York public school system has counted 140 spoken languages. In short, immigrants are anything but a homogeneous group, and many will have to endure the challenge of learning a new language, assimilating into the hourglass-shaped economy, and gaining enough education to "make it" in their new context.

STRESS, ADAPTATION, AND ACCULTURATION

Most immigration studies have focused on adult processes of adaptation and acculturation. Although recently there has been a growing amount of attention paid to immigrant children by both scholars and practitioners, there still exists a void in studies that illuminate the mechanisms of risk and resilience particular to these children. Researchers tackling this issue within the field of immigrant studies face the challenge of disentangling the effects of such simultaneous influences as normative development, acculturation to a new country, and adaptation to new challenges.

Psychologists Cynthia García-Coll and Katherine Magnuson (1997) have pointed out that while theories have outlined the effects of different variables, often those theories lack empirical grounding. As for those studies that are empirically sound, most of the findings on the effects of immigration have been based on clinical samples, resulting in an orientation toward the negative impact of immigration, rather than a consideration of the possible positive outcomes. García-Coll and Magnuson also argue that a developmental perspective entails the consideration of normative adjustment and development, both of which take place as part of the acculturation processes. More recently, theories are focusing on the

resilient characteristics and benefits of immigration. This shift is reflected in the growing recognition of constructs such as biculturalism that describe the experience of immigrants who become competent and comfortable navigating between their own and the mainstream culture.

While factors such as poverty, poor schooling, and medical ailments have a similar effect on all children, there are circumstances that uniquely affect immigrant students. The migratory experience is a major life transition and can be very stressful, because it often includes: experiences of loss and grief; family separations and reunification difficulties; issues of mental health and psychological trauma, sometimes related to war; discrimination and prejudice; and stress related to illegal immigration status. Not all families react in the same way to such stressors, nor is immigration always a painful and deleterious experience. Yet, some of these factors tend to be common and get exacerbated or ameliorated by the presence of other risk or resilience mechanisms in the lives of immigrant families. Overall, immigration is a transformational experience that is likely to affect development in important ways. Following is a discussion of these factors in light of the dialectic between risk and resilience.

LOSS AND GRIEF

Immigration entailing losses related to children and families leave behind important social relations, including extended kinship networks. In that sense migration has been compared to the death of a loved one. In addition to this loss, the person leaves familiar places, rituals, customs, and even loved objects. Celia Jaes Falicov, a clinical professor at the University of California, views migration as a “small death” in that the process is not clear, complete, or irretrievable, and immigrants ultimately find ways to deal with this loss (2002). The longing for familiar sights, smells, and sounds may surface following migration, or years later depending on the coping strategies families use to deal with their loss.

Developmentally, there are differences between younger and older children, especially related to friendships. García-Coll and Magnuson (1997) argue that for younger children, friendships can mean someone to play with, while for older children friends are sources of emotional support, changing the im-

pact of what losing friends can represent. Likewise, if older children are not in agreement with the decision to move, and usually it is the case that parents make the decision alone, this can result in resistance and influence a youth's attitudes towards adaptation. Despite, and in part due to, these developmental challenges, the skills required to adapt to the stresses of migration can result in immigrant children becoming particularly competent in navigating the challenges of cultural diversity that are important to successful functioning in a pluralistic society such as the United States.

FAMILY SEPARATION AND UNIFICATION

Studies of immigration show that families often separate to ease the settlement in the new country. Children are frequently left behind with relatives or other caregivers, while parents or single parents seek financial stability to be able to bring their children with them. In fact, the main reason for immigration continues to be family reunification. In a five-year longitudinal study on immigrant children, conducted with five ethnic groups (Mexican, Dominican, Haitian, Central American, and Chinese), Carola and Marcelo Suárez-Orozco (2001) found that only 20 percent of the four hundred children studied traveled as a family unit in the process of immigrating to the United States; the rest had been separated from either one or both parents.

But reunification is not always smooth, especially when the separation involves years. Children may actually experience reunification as a second loss, the first having been of the parent and the second being of the substitute caregiver. The effects of parental separation are felt especially by young children between six months and four years of age, during the time when they are forming important attachments to caregivers. Studies have shown that antisocial behavior and “acting out” against the mother is associated with children who are separated from their mothers at a young age. This separation also is known to result in maternal feelings of guilt and failure. In addition, immigrant children may have to adapt to a new family unit, where the presence of new siblings can generate feelings of jealousy and exclusion.

The way in which the separation is framed and understood by parents and caregivers influences the

way children will interpret it. In the Caribbean culture, leaving children with relatives is not uncommon and children may not experience a parent's departure as abandonment; on the other hand, in a different context mothers who leave their children behind may be seen as neglectful, thus creating ambivalent feelings among children and parents upon reunification.

Reunification also requires adjustment by parents and children, since rules and other disciplinary practices have to be renegotiated. Parents may become stricter in order to protect their children in neighborhoods where violence and drugs are prevalent. In her study of West Indian families in New York, sociologist Mary Waters (1997) describes conflicts around cultural differences in the conceptions of punishment, whereby West Indian parents view physical punishment acceptable as a way to educate children, while many American parents view this practice as abusive. Such cultural differences can lead to intervention by authorities. In turn, parents can feel disempowered to deal with their children's upbringing, lacking the social support available in their communities of origin. An aggravating factor is that of the long hours worked by parents, often at low-paying jobs, making them less available for their children and leaving the youngsters without adequate supervision. Waters found that in the process of reunification there is often a bi-directional acculturation fear or loss-based trauma, with children feeling that their parents have been Americanized and parents fearing for their children's Americanization.

FAMILY ROLE CHANGES AND ADAPTATION CONFLICTS

Immigration requires families to reorganize and cope with stresses related to this major life transition, such as changes in jobs, housing, healthcare, and social relations, all of which can be very disruptive. Families may feel a lack of control and competence in the new environment, in part because their routines are disrupted, but also because each culture has particular ways of dealing with developmental changes and transitions, including celebrations or rites of passage. These cultural scripts may not be adaptive in the new context. Psychiatrist William Beardslee (1997) found that recent immigrants often experience depression, especially if they do not speak the

language of the host country. In addition, changes in gender roles are common with males and females assuming more traditional gender-based functions than might have been the case in the home country. During the transition, males typically focus on the present material needs (instrumental), while females typically provide emotional support (affective). While these changes may be adaptive at the beginning, over time they can result in dysfunction if one of the family member's acculturation is retarded, generating feelings of isolation.

Through schooling, children tend to acquire the new language more quickly than their parents, and often serve as translators in different situations, both institutional and informal. Having children participate in activities that typically are reserved for adults, such as translating medical appointments, can create conflict due to confusion and blurred boundaries, which both children and adults can come to resent. Simultaneously, the competence required to carry out these adult-oriented activities can serve children well; hence the impact is largely dependent on how these actions are interpreted within the family and understood within the larger community.

For immigrant parents who have mixed feelings about American culture the process of raising children can be particularly confusing and stressful. In adolescence especially, the effects of immigration can exacerbate normative generational conflicts between youngsters and parents. Common conflicts include the expression of sexuality and aggressiveness, assertion of independence and individualism, and involvement in sports and academics. In addition, if parents are depressed or have ambivalent feelings about the immigration, they can become less available to their children emotionally, which can result in the children experiencing more difficulties that compound their own sense of loss.

REFUGEE CHILDREN

Compounding all the stresses of immigration is the experience of coming to a new place as a refugee. Refugees and asylum seekers often have been exposed to violence and war. They leave their countries of origin because they fear persecution for reasons of race, religion, nationality, or affiliation with a particular social group or political opinion. Sharon Russell, a researcher at the Center for International

Studies at the Massachusetts Institute of Technology, estimated that at the end of 2000 there were approximately 14.5 million refugees and asylum seekers around the world (Russell 2002). Refugees come mostly from Asia, Europe, and Africa. In the year 2002, 58,000 people requested asylum in the United States. But not all those who request asylum are granted refugee status, and for those families this usually means either returning to the country where they may have suffered persecution or seeking a second country that might accept their petition. These experiences obviously influence the process of adaptation to a new culture.

Refugee children commonly experience more stress during immigration because of their having lived through severe forms of violence, warfare, loss, and deprivation. Unlike those migrants who choose to leave their countries for other reasons, refugees do not always have the opportunity to plan and to prepare emotionally for the move. Studies report that refugee families tend to suffer more undesirable changes and feel less control over their lives. Traumatic experience can cause Post Traumatic Stress Disorder (PTSD). Symptoms of PTSD in children vary depending on the severity of the injuries, degree of violence, and their developmental moment. Children's symptoms often go untreated, in part because there is little research in this area.

García-Coll and Magnuson (1997) noted a host of challenges to refugee children's development resulting from the trauma they have experienced. Young refugee children can show anxious attachment, appear withdrawn, and lose functional, communication, and social interaction skills. School-age children can become rude, irritable, and argumentative, and commonly display somatic symptoms. The academic achievement of refugee students tends to decline over time. Adolescents may engage in antisocial behavior and lose impulse control, be ostracized, and become pessimistic. Refugee children placed with foster parents upon arriving in the United States may experience the stress of adjusting to a new family. It is clear that for refugee families the receiving community plays a key role in their adaptation. In dealing with refugee children, it is critical to consider their war-related experiences and potential traumatic sequels in order to understand their needs. At the same time, multiple studies show that most refugee children ultimately do well, over-

come difficulties, and become healthy. By definition, the majority of healthy refugee children are resilient, having overcome extraordinary obstacles to their social and emotional development.

MIGRATORY STATUS

Lack of proper immigration documentation is perhaps the one most confounding and stressful circumstance immigrants can face. Based on the March 2002 Current Population Survey, Jeffrey Passel and his colleagues estimated that there are approximately 9 million undocumented immigrants in the United States, of which 41 percent are women (Passel, Capps, and Fix 2004). The survey reports about 3 million children who are U.S. citizens born here but to undocumented parents, and approximately 1.6 million under eighteen years of age who are undocumented. Illegal status is a major barrier for accessing social services and makes these populations vulnerable to exploitation. Undocumented parents tend to make much less money than their naturalized counterparts. In many cases, immigrants experience downward mobility, and, despite their professional credentials in their country of origin, they are often forced to work menial jobs. Passel et al. note that undocumented immigrants make less than half the minimum wage. In order to make ends meet parents must work long hours. The prolonged absences from home leave their children lacking in the supervision and emotional support necessary to adapt in the new country.

In families that are composed of both legal and illegal members, namely mixed families, policies aimed at increasing deportation or "removal" (the technical term used in immigration law) can dramatically affect the children's well being. Jacqueline Hagan and Nestor Rodriguez, co-directors of the Center for Immigration Research at the University of Houston, conducted a study on the effect of the 1996 U.S. Immigration Reform, which limited access to public services for immigrants, made it more difficult for immigrants to sponsor their families, and expanded criminal enforcement activities (Hagan and Rodriguez 2002). They found that those measures had a detrimental effect on families, negatively affecting their income and creating tremendous fear of deportation. Often the parent who was the breadwinner was deported, leaving their families behind

without the means to support themselves. In addition, fear prevents families from accessing resources to which they are entitled or going to authorities when they are the subjects of abuse and violence. Fear also disrupts important family routines and can preclude families and children from participating in extracurricular activities. In the case of the health care system, common illnesses in children go untreated, such as visual impairments or ear infections, and often families end up having to cover the full cost of expensive bills, while still lacking proper health care.

Despite the large number of undocumented families, there is little research on the impact of “illegal” status on children. Their status may make it difficult to trust school authorities, but perhaps the educational impact of being undocumented is most severely felt by adolescents who have been educated in the United States but who cannot easily access higher education. While there are no figures on dropout rates of undocumented youth, studies show that future aspirations play a critical role in school achievement and in predicting dropout, thus for these children, the discouragement associated with not being able to use their education to pursue college and get better economic opportunities often leads to school disengagement, which correlates with dropping out. Those resilient children who remain connected to school and manage to graduate with a high school diploma cannot access the opportunities of their documented or mainstream counterparts. There are two main barriers to undocumented youth accessing college: first, most states’ public higher education institutions are mandated to request students’ proper documentation in order to apply for college; second, limited financial assistance is available to undocumented immigrants.

Even if they have received most of their education from an American institution, undocumented students do not have access to tuition subsidies available to other in-state residents, based on a federal statutory law that forbids states to provide illegal immigrants with tuition assistance. If such students are determined and able to enroll in college their fees are likely to be twice as high those paid by regular in-state students. This fact substantially reduces the likelihood of undocumented immigrant youth continuing their education; those who do persist tend to have a considerably prolonged course of study.

Stories abound of youth who excelled in their schools, were accepted into elite institutions, possibly even with scholarship offers, only to then be denied entrance and financial aid due to their immigration status. The events of September 11 have made their situation worse due to heightened measures aimed at immigrants. For many undocumented youth encountering these obstacles, the consequences can be quite severe, including experiences of hopelessness, despair, and clinical depression.

Out of concern for the plight of undocumented children, the Senate Judiciary Committee recently approved an amendment to the *Development, Relief and Education for Alien Minors (DREAM) Act*, which would allow certain undocumented students to gain conditional permanent resident status. The policy is designed to help prevent the deterrence of students’ motivation and hope, and allow them instead to become full participants and contributors to American society. The political argument is that denying undocumented youth the opportunity to gain a college education is to condemn them to the status quo: low-paying, low-skilled jobs, often as part of the underground economy perpetuating conditions of poverty and risk. In response to the viewpoint that undocumented immigrants are a financial burden to society, the amendment to the DREAM Act argues that it is less costly in the long run to provide the young generation with educational opportunities that will reduce subsequent costs while simultaneously increasing economic productivity.

DISCRIMINATION AND PREJUDICE

Large numbers of immigrants have settled in inner-city neighborhoods with great racial segregation, low-quality schools, problems of violence, and weapons and illegal substances made readily available through underground economies. The result of not having the infrastructure needed to better integrate immigrants into the larger society has disenchanting many youth who, seeing their hopes shortchanged, become resentful. Anthropologist Diego Vigil (2002) traced back the origins of the Chicano street gangs in Los Angeles to discrimination, segregation, inadequate infrastructure, and the unwillingness of traditional white institutions to integrate Mexican youth back in the 1930s. A problem that started with a few street boys developed into an epidemic in which large num-

bers of children were being socialized in the streets generation after generation.

Despite many gains in civil rights and changes in societal attitudes since that time, prejudice and racism persist nonetheless. The perceptions of and attitudes toward African American people have factored significantly into the experience of immigrants, a fact often not accounted for in theories relating to immigration. Black immigrants, such as those from the Caribbean and West Indies, often confront the negative images of African Americans that are projected upon them. This requires that they either resort to their national identities or else adopt an African American identity. Though not necessarily negative, this second option may promote in these immigrant youth a belief that they are unlikely to succeed in the United States.

Psychologist Carola Suárez-Orozco uses the term “social mirroring” to describe how the images or reflections that others mirror back to individuals represent a critical function that influences the development of one’s identity (Suárez-Orozco 2000). When those reflections are positive, feelings of competence and a sense of being worthwhile are instilled. When they are consistently negative, a breakdown in the development of a positive self-image is likely. A combination of negative social mirroring along with structural discrimination and prejudice can lead to an adolescent experience marked by discouragement and frustration. An interesting finding of the longitudinal study co-directed by Suárez-Orozco is that most children were aware of the negative images others may have had of them (Suárez-Orozco, Suárez-Orozco 2001). Coping mechanisms—the ways in which youth deal with those messages—are critical in determining the consequences of these perceptions. Youth can develop an oppositional attitude toward schooling if they associate it with hostile and oppressive values; conversely, immigrant students often embrace schooling experiences if they perceive them to counter the negative social mirroring they experience elsewhere.

Falicov (2002) contends that youth who are aware of discrimination and racism may gravitate toward activism and other forms of political or social engagement focused on issues of social justice. For immigrant youth of color, in particular, such forms of activism can serve a critical protective function and become a primary determinant of whether these

youth will successfully cope with the particular demands of their social situation or fall prey to the risks that overcome many of their peers.

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ETHNIC AND RACIAL IDENTITY DEVELOPMENT

Identity development is broadly defined as the processes by which people come to understand who they are and how they fit into society. Renowned psychologist Erik Erikson articulated a model of adolescent identity development that has heavily influenced the past forty years of research in this area (1968). According to Erikson’s clinical and ethnographic observations, adolescence is a key period during which identity is formulated in relation to past experiences, societal influences, and the individual’s expectations for themselves. Central to his formulations is the notion of identity crisis, or the processes through which adolescents grapple, and in many cases struggle, with the options laid out before them. By placing crisis at the center of identity development, Erikson introduced the notion of “risk” into studies of adolescence. That notion caught on and has been instrumental to framing adolescent development as an inherently risky endeavor. In fact, most contemporary models of adolescent development assume risk-taking behavior as normative.

For youth of color and for those of ethnic backgrounds that vary from the mainstream culture, however, adolescent development poses particular challenges. In fact, developmental researchers have begun to take great pains in capturing important differences in adolescent development, based on such factors as race, ethnicity, social class, and gender. More recent studies have shown how identity development is a multidimensional process that is influenced by these factors and others. Ethnic identity, for example, can include the influences of race and cultural practices, including the role of gender as understood from a particular ethnic perspective. In this entry, we examine the relationship between racial and ethnic identity development, risk, and resilience.

ETHNIC IDENTITY AND BICULTURALISM

The study of ethnic identity has flourished in the past two decades, but, according to the developmentalist Rosa Hernández Sheets (1999), there is still little agreement on what ethnic identity comprises. Some researchers define ethnic identity as the psychological sense of belonging to an ethnic group, based on either objective characteristics (e.g., language, food, race) or subjective ones (e.g., shared values, goals, and beliefs). Ethnic identity is different from racial identity in that the latter has usually referred to black identity in contrast to white identity. In fact, ethnic identity as a concept emerged from the void left by racial discourse that focused solely on white-black dynamics. Ethnic identity contrasts with cultural identity, which groups people based on age, social class, or common cultural beliefs and experiences, some of which can be similar across different ethnic groups.

Two trends in the conceptualization of ethnic identity warrant particular mention. A number of studies conceive of ethnic identity as defined by the labels people choose with respect to their ethnic background, which can vary from a specific national identity (such as Colombian or Vietnamese), to a pan-ethnic identity (such as Latino or Asian). From this perspective, ethnic identity is influenced by the level of the individual's assimilation or adaptation to the dominant culture and by their generational status (immigrant versus the children of immigrants). Those who identify heavily with their family's country of origin are less likely to accept pan-ethnic, compound identity descriptions such as Latino American or Asian American. Their ethnic identity tends to be more heavily nationalistic. For recent immigrants, ethnic identity is particularly complex and self-selected ethnic identity labels may vary according to particular situations. Within one's own ethnic group, country of origin might be embraced, whereas within the larger society, broader pan-ethnic labels might be selected. These choices carry important implications for defining and understanding who one is and even how one is expected to behave or interact within particular social contexts.

Another scholarly viewpoint outlines stages or phases of ethnic identity formation. Within this developmental approach, ethnic identity is composed

of two separate dimensions: the attitudes toward one's own ethnicity and the attitudes toward the dominant culture. Jean Phinney and her colleagues (Phinney 1990; 1992; 2000; Phinney and Devich-Navarro 1997) found that youth go through three stages, each derived from Erikson's model of identity formation: foreclosure, exploration, and achieved identity. The foreclosed ethnic identity has been inherited from one's family with little opportunity to explore alternatives or define the meaning of this identity for one's self. Exploration refers to the process of uncovering alternatives and progressing toward the development of an ethnic identity with which one is comfortable. And the achieved ethnic identity is defined by a committed sense of belonging to and positive feelings about one's ethnic group, as a result of having explored alternatives. This ideal developmental achievement includes what Phinney and other scholars call a bicultural identity, which refers to an ethnic identity simultaneously rooted in affiliation with one's homeland and the new country (Phinney 1990; 1992; 2000; Phinney and Devich-Navarro 1997).

Bicultural individuals are able to navigate comfortably and competently within their own ethnic group and the larger mainstream culture. Although the process of becoming genuinely bicultural entails a good deal of stress, it also helps build skills, such as the capacity to empathize with and learn from a broader range of people. The psychologist Teresa LaFromboise and her colleagues (1993) proposed a model of bicultural competence that involves cognitive (e.g., knowledge of cultural values and beliefs and a sense of efficacy within the two cultures), emotional (e.g., a strong sense of identity and an appreciation of both cultures), and behavioral (e.g., communication ability and a sense of being grounded through social networks) skills. As discussed in the resilience mechanisms entry, the development of competencies such as these serve to protect youth against the risks they may confront in other aspects of their day-to-day life.

Biculturalism counters models of acculturation and assimilation that assume successful adaptation requires immigrants to shed their original ethnic identity to acquire the attributes of the mainstream culture. Such models usually focus on the negative impact of the acculturation process, such as feelings of stress, anxiety, alienation, and not belonging to

either culture. While that may be the case for many individuals, studies consistently show that developing and maintaining bicultural competencies play an important role in psychological well being.

ETHNIC IDENTITY AND SCHOOL ENGAGEMENT

Literature on ethnic identity sheds light on the processes involved in school engagement by illuminating the relationship between students' perceptions of themselves, the cultural dynamics that influence these perceptions, and their experiences of schooling. Studies in this area have proposed theoretical models explaining the variation in academic performance among different ethnic groups. While some groups tend to fare well academically (e.g., Asian/Pacific Islander and white students), others tend to experience academic failure and be at a high risk of dropping out of in school (e.g., African American and Latino). The United States Department of Education reported that in 2000 the dropout and high school graduation rates still point to a racial/ethnic gap: white and Asian/Pacific Islander students have higher rates of graduation compared to their African American and Latino counterparts. Likewise the proportion of people between sixteen to twenty-four years of age without a high school credential was 27.8 percent for Latinos, 13.1 percent for blacks, 6.9 percent for whites, and 3.8 percent for Asian. Race and ethnicity continue to be important predictors for school performance, even after accounting for economic differences.

The cultural-ecological model proposed by John Ogbu and Herbert Simmons (1998) takes into consideration historical, economic, and cultural forces. Ogbu and Simmons found that differences in the structure of opportunity reflected in the job ceiling, whereby certain minority groups experience that economic and job privileges are not consistent with their educational credentials, have been detrimental to these groups' attitudes towards schooling. Moreover, in the specific case of African American students, who historically have received a poorer education based in part on beliefs of their "lower capacity" compared to whites, assumptions of inferiority have influenced the way they see themselves in the process of schooling. Ogbu and his colleagues found that in the face of these experiences, particu-

lar minority groups may develop an oppositional collective identity and an oppositional cultural frame of reference against the dominant group. By recognizing the enduring discriminatory situations, those groups generate mechanisms that set boundaries between whites and blacks. Unfortunately, schooling may become associated with the dominant group, generating conflictual dilemmas for minority students who could otherwise achieve at a higher level. Ogbu and his colleagues found that African American students typically create strategies to resolve the tension between being perceived as acting white and their wanting to do well in school, but these resolutions often compromise their overall school performance.

This concept of "acting white" is critical, given its implication that students' sense of connection to school can be heavily influenced by their cultural frames of reference. This finding has generated a range of responses, including some from African American and Latino scholars who argue that Ogbu has overgeneralized his findings to students of African American and Latino descent. Studies countering Ogbu's findings show that although many African American and Latino students do subscribe to the acting white phenomenon, many others do not. Accordingly, the labeling of this finding as a collective cultural frame of reference seems to be a stretch.

What has become known as the "burden of acting white" plays out differently depending on the values held by different groups and their histories of discrimination. In the case of immigrant students, their school perceptions are influenced by experiences in their country of origin, their English proficiency, and with the reception they receive in the United States. Thus, social class, skin color, race, and gender dynamics inform their ethnic identity development. Identity researcher Rubén Rumbaut (1996) asserts that for those who appear to be white, ethnic identity is an option that can be appealed to whenever it is desired. In contrast, those students who look black or Asian are not as free to choose their ethnic identity. They commonly are stuck with stereotypes placed on them by others.

In studies of school engagement and its different dimensions (readiness, attendance, effort, help-seeking behavior), how ethnic and racial minority students perceive themselves and how their immediate context, including their peers and community, value

their cultural background is crucial to how they negotiate their ethnic identity. While African American students may be caught between acting black versus acting white, Mary Waters (1999) found that others such as West African are struggling to not “act black” and not be perceived as blacks, because they understand the racial dynamic present in American schools. Yet, as other researchers point out, it is important not to overlook the intragroup differences, given that their minority status is not the only factor that informs how students experience and value school. While some students see schooling as their way of resisting discrimination and ensuring upward mobility, others resist such discrimination by not engaging in the schooling process.

ETHNIC IDENTITY VERSUS CULTURAL IDENTITY

Although it is easy to equate ethnic identity with cultural identity, there are important distinctions between these concepts and their relationship to school experiences. Ethnic identity is informed by a student’s ethnic background, including nationality, as described above. Conversely, there are cultural differences within ethnic groups in terms of social class experiences and values (middle class versus working class, for example), religious affiliation, and political orientation (traditional/conservative versus progressive/liberal). One’s cultural identity development can be strongly shaped by any combination of such factors. Further, some students feel strong affiliations with their peer culture whereas others identify more strongly with the culture of adult authority in their families, schools, and communities. The adult-youth cultural divide is nicely captured by the sociologists Min Zhou and Carl Brankston (1998) in their study of Vietnamese students who were encouraged by their parents to be successful, while at the same time being pulled by their peers in a youth culture oppositional to adult authority. Such cultural divides can lead to extreme stress and identity confusion for young people struggling to solidify a sense of self-definition.

The distinctions between ethnic, racial, and cultural identity have created different schools of thought regarding the low academic achievement of many African American and Latino students. In the one camp, researchers like Ogbu and Simmons (1998)

relate students’ experiences of racially and ethnically based discrimination and the job ceiling phenomenon to low academic achievement. They view this phenomenon as a racial and ethnic group phenomenon. Other researchers such as Laurence Steinberg (1996) have found that the more specific and local contexts of acculturation, such as the peer culture, are critical to predicting immigrant and ethnic minority students’ academic outcomes. Steinberg, Brown and Dornbusch (1996) also found that first- and second-generation immigrant students tend to decline academically the longer they are exposed to U.S. norms. The more such students become “Americanized” the less time they spend on homework, and the lower their GPA and overall academic achievement. As Steinberg argues, Americanizing into an indifferent attitude towards schooling and a stronger orientation towards social and recreational pursuits, prevalent in America, may explain many minority students’ decline (Steinberg, Brown, and Dornbusch 1996). Rather than being a particular ethnic group phenomenon, Steinberg’s findings may be viewed as an artifact of peer culture and the development of a peer-influenced American cultural identity.

In short, studies of ethnic versus cultural identity are extremely valuable to understanding school engagement and academic achievement. In particular, global attributions of academic success and failure to larger racial and ethnic group norms may shield educators from more clearly understanding how more specific cultural identity issues play a critical role as well. Further research in this area is necessary to deepen our understanding of school engagement and academic success among ethnically, racially, and culturally diverse students.

ETHNIC AND RACIAL IDENTITY AND SCHOOL PRACTICES

Literature on resilience has long recognized the importance of cultural factors in school, clinical, and counseling settings. Studies show that supporting youths’ cultural traditions within the school can translate into adaptive functioning by helping them engage more actively with the educational environment. Likewise, studies of community assets, such as the work of Peter Benson and the Search Institute described earlier, show that youth can find strength in the traditions, symbols, and values of their cultural

heritage. Studies such as these suggest that cultural competency, or knowledge of one's own cultural traditions should be promoted in youth.

Consistent with this suggestion, some approaches have adapted already existing intervention models to different cultural "sensitivities," such as finding bilingual practitioners to work with language minority students. While such practices can be effective to some extent, it is important to devise interventions that put cultural strengths at the forefront. Arts-related programs (e.g., dance, painting, martial arts) have perhaps done the best job in exploring and tapping into minority students' cultural traditions and practices. Recently, humanities scholar Doris Sommer (2005) has put forward the notion of "cultural agency" to describe how, through cultural expressions and initiatives, a sense of agency and creativity can be promoted, leading in turn to further democratic endeavors. Yet, more intervention and evaluation research is needed to find ways of drawing from cultural traditions to promote strengths in at-risk youth.

At the intersection of social and academic development, Robert Selman and his colleagues (Selman 1997; Selman, Watts, and Shultz 1997) have pioneered the use of pair counseling (pairing children of different backgrounds in a social development intervention) to explore and utilize ethnic and cultural values in the promotion of interpersonal and intercultural awareness. Two of Selman's colleagues, Michael Karcher and Michael Nakkula (1997) presented an in-depth analysis of interracial pairings to exemplify the power of the pair counseling approach to promoting intercultural understanding and cultivating interracial friendships. Interventions of this type should include parents, who may have mixed feelings about interracial and intercultural initiatives.

Schools have an important role to play in creating a context that can help parents examine their own race and culture-based beliefs. Fostering social awareness and promoting perspective-taking abilities can occur through school-based activities that involve parents. Too frequently parents in particularly stressed urban schools are called upon only when their children are in trouble. By reaching out for parent involvement in their children's prosocial, intergroup activities, teachers and school principals have an opportunity to help break down the cultural divide that exists between many home and school

environments, particularly for low-income parents with relatively little formal education. To accomplish this, however, educators themselves must examine their own biases or stereotypes that may hinder outreach to parents of different racial and ethnic backgrounds.

Prominent scholars of black identity development, such as William E. Cross, Jr. and Linda Strauss (1999), have outlined different psychological mechanisms that support African American children's adjustment and can be promoted in schools. These include filtering out or critiquing racist information to which students may be exposed through the media or other communication forums; promoting nonracist intergroup experiences; and facilitating healthy, proactive bonding among African American youth around achievement-oriented activities as a means of counteracting attitudes leading to school disengagement and skepticism. Thus an awareness of the different aspects of racial and ethnic identity development allows educators to support minority and nonminority children in developing multicultural competencies. In this sense, racial and ethnic conflict can be seen as an opportunity to help youth and adults, teachers and parents alike, develop important skills in the area of multicultural interactions.

BILINGUALISM AND BILINGUAL EDUCATION

Bilingual education has been one of the most controversial debates in the field of education, bringing into play issues from the political realm as well as the sociolinguistic. Major disagreements exist over the value of bilingualism, as well as the best way to educate language minorities to meet the same challenges posed today to mainstream children regarding standards-based assessments and high school graduation requirements. In part, bilingualism has been controversial because in the United States the idea of one language has represented national unity, and "good" English has been the measure of citizenship and democracy. The negative feelings toward bilingual education have, in the past, been supported by studies suggesting that bilingualism creates confusion and cognitive delays. More recent research has disproved these findings, and shown that they were largely based on faulty methodology. In fact, bilingualism now has been associated with cognitive

flexibility, enhanced abstract thinking, academic achievement, higher future aspirations, and better occupational opportunities.

The degree and nature of a child's bilingualism varies depending on demographic and sociocultural factors, including the level of integration within the community and the length of residence in the United States. These constitute key factors in second language acquisition and native language maintenance. While most immigrant parents urge their children to speak the language of the dominant culture, researchers point to the influence of parental socioeconomic factors on language acquisition. Parents of higher socioeconomic status can provide their children with more opportunities to gain the skills of the majority culture, while low-income parents living in extremely segregated neighborhoods will have a harder time doing the same. Accordingly, ethnic (and language) composition of the school and the children's community will be critical in helping students gain English skills and preserve their mother tongue.

Linguist Catherine Snow (Bucuvalas 2002) argues that there is no critical period for second language learning; therefore, older learners can become bilingual and can actually use their primary language skills in the acquisition of their secondary language. She points out that while pushing immigrant students to learn their second language as early as possible does not do any harm, it is important to consider that younger students are more likely than their older peers to lose their first language. Thus, if the goal is true bilingualism, native language maintenance and second language acquisition are equally important. Proponents of bilingual education rely on research that shows that English fluency in reading and reasoning takes longer than a year, and that good programs need well-prepared teachers. However, if short-term immersion

programs are to be implemented, there are systematic curricula in the early school years that can benefit second language learners.

A recent study conducted by Nonie Lesaux and Linda Siegel (2003) found that after implementing a systematic reading curriculum in elementary school children in Canada, bilingual children often surpassed their monolingual counterparts. The language awareness of young second-language learners seemed to explain this finding, and clearly children in similar situations could benefit from such systematic and carefully devised interventions. Despite research supporting the benefits of bilingualism, bilingual programs have been systematically dismantled over the past several years throughout the United States. Detractors of bilingual education helped pass *Proposition 227*, an initiative aimed at terminating bilingual programs in California's public schools in 1998. Similar versions of the same bill were later passed in several other states. As a result, today many students are denied bilingual instruction, despite researchers and practitioners' agreement that good bilingual programs promote students' academic achievement and other educational outcomes.

The debates over bilingual education strike at the heart of educational reform policies for ethnic and language-minority students. Supporting the maintenance of native language skills as immigrant students learn English is a clear indication that the school system values the cultural backgrounds of its families. The resilience literature is quite definitive on this count: supporting students' cultural competencies helps build strengths that can be utilized to cope with the demands and stressors of everyday life (Masten and Reed 2002; Benson 1997).

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ACHIEVEMENT MOTIVATION

Motivation is the study of goal-directed behavior—the exploration of what propels individuals to choose some goals over others. Achievement motivation is the study of goal-directed behavior in educational settings. Researchers who study achievement motivation are interested in factors other than actual intelligence that predict the kinds of activities children choose to pursue and the persistence with which they pursue them. How is it that some children are drawn to challenging tasks, while others are content to work on problems with which they already have some familiarity? Why do some children fall apart at the first sign of difficulty, while others seemingly throw themselves into difficult problems with abandon? Why does the enthusiasm with which children start schooling deteriorate as early as the second grade? What goes on in homes where children are doing well in school that may not be going on in homes where children are doing poorly? And, how can we best understand ethnic and cultural differences in achievement?

In this chapter, we will provide an overview of theory and research that has addressed these and other related questions. We begin by providing a background on the theoretical approaches that have influenced the study of achievement motivation. We show that, over the course of the last century, theories have evolved from the general to the specific, and become much more comprehensive of the multiple factors that serve to foster or inhibit the motivation to learn. We no longer view achievement motivation as an inner need or drive that people have to a greater or lesser degree. We no longer attempt to develop mathematical formulas to predict achievement behavior. Instead, we view achievement motivation as a constellation of beliefs and behaviors, co-constructed in the multiple contexts of home, school, and community, in which culture and

ethnicity play central roles. This evolution in our understanding has been accompanied by a change in research methods. Researchers are increasingly adopting mixed methods approaches, in which they combine both quantitative (e.g., surveys) and qualitative (e.g., individual interviews) methodologies in their investigations.

Throughout this chapter, we consider the ways in which children's achievement beliefs and behaviors develop and change over time, and examine how debilitating beliefs, such as low expectations, can be alleviated in the classroom. Overall, we show how theory and research have evolved to place culture and context at the center of investigations into the factors that foster or inhibit achievement motivation.

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EARLY GENERAL THEORIES OF MOTIVATION

Although studying goals behind actions, or “why people do what they do” is one of the basic questions of psychology, it is only over the last few decades that motivation has grown into a separate field of psychological inquiry. For the first half of the twentieth century and certainly before, studies of motivation reflected more general trends in personality theory. Theories of motivation, then, were presented in the context of general or “grand” theories of personality. The most prominent of these—psychoanalytic, field, and behaviorism—provided blueprints for later theorizing, which became increasingly specific and targeted different aspects of the relationship between achievement beliefs and behaviors.

FREUD'S PSYCHOANALYTIC THEORY

Sigmund Freud based his theory of human development on the notion that basic biological instincts drive behavior. His psychodynamic conception of development placed the need to satisfy biological urges at the center of an ongoing lifelong struggle for happiness and psychological equilibrium.

Freud incorporated concepts from the field of physics to argue that humans are born with a fixed amount of psychic energy, which he spoke of as a closed energy system. According to Freud, when individuals perceive a valued goal or object as unattainable, their psychic energy becomes dominated by the object of their desire. Accordingly, this leaves less psychic energy available for the pursuit of other, perhaps equally important goals.

Freud proposed that the struggle for happiness and psychological equilibrium exists in three mental structures. We are all born with the *id*, where our impulses and desires for instant gratification reside. The *ego* develops out of the realization that our own individual needs cannot always be met in a time and manner we dictate. Eventually, this realization leads to the formation of the *superego*, or conscience, which operates to keep a check on the desires of the *id* and the attempts of the *ego* to control socially unacceptable behavior.

Consider, for example, a low-achieving student whose parents have consistently made clear their disappointment in his school performance. He may wish or fantasize about finally being on the receiving end of praise and parental approval. His *ego* will remind him of the need to invest long and hard hours of study to attain this goal. If this route is acceptable to him, his *id* and *ego* will have achieved a balance, or homeostasis. If not, his *ego* will struggle against his *id*'s socially unacceptable solutions, such as cheating.

Freudian theory does not figure in contemporary views of achievement motivation. While we would all accept the general principle that, as a species, humans have internal and unconscious desires to achieve, these are very difficult to test. It is simply not possible to predict motivational thought or behavior from wishes or other aspects of an individual's fantasy life. However, unlike behavioral theorists, Freud, through his concept of the *ego*, placed cognition at the center of understanding individual be-

havior, a concept that is critical in contemporary theories of achievement motivation.

LEWIN'S FIELD THEORY

Field theory, as conceptualized by Kurt Lewin, is guided by the principle of contemporaneity. In the tradition of Gestalt psychologists, Lewin argued that behavior (B) is determined by properties of the person (P), as well as the person's psychological environment (E) at the time. His well-known mathematical formulation, $[B = f(P, E)]$, represented this hypothesis. While an individual's past experiences are indeed important, Lewin believed that these should be viewed as having a contemporaneous effect on the individual and her environment. As such, his theory has been described as ahistorical in nature. Lewin introduced the concept of "life space," which represented all the facts that are said to influence an individual at a given point in time. He defined the psychological environment as that which the individual perceives consciously, as well as other factors that may not be conscious at the time (Lewin 1938).

Lewin defined goal setting, or level of aspiration, as the result of two factors in the immediate environment: (1) the subjective evaluation, attractiveness, or valence of a future success or failure, and (2) the perceived probability of success or failure. Importantly, Lewin and his colleagues found that anticipated success will be perceived as a more desirable outcome as a task gets harder and harder (Lewin, Dembo, Festinger, and Sears 1944). By the same token, the anticipation of failure is more debilitating if the task is perceived as having been easy. According to Lewin, an individual will set a goal in an achievement situation by weighing the valence of success and failure against the probability of success and failure. In particular, he argued that valence is determined by characteristics of the task, as well as personality variables, such as the motives to "seek success" or "avoid failure."

Lewin's notion of valence was very influential in the development of contemporary expectancy-value models of achievement motivation. Further, his emphasis on seeing the individual and the environment as inextricably connected is being renewed in current theorizing, which is placing increased attention on the social and cultural contexts of achievement motivation.

BEHAVIORISM

Unlike psychoanalytic and Gestalt approaches that emphasized internal processes and psychological representations of behavior, behavior theories are focused on actions that are observable. Behaviorists were greatly influenced by Darwinian theory, and focused on studying the functional significance of human actions. Behaviorists studied and observed human and animal behavior in laboratory settings, since they assumed that the laws governing animal behavior could be often extended to humans.

As conceptualized by the concept of drive, Alfred Hull proposed that humans are driven to quell internal needs that result from deprivation—lack of food, water, or rest (Hull 1943). The organism's goal is to maintain homeostasis, a state of optimal balance between our body's mechanisms. Hull differentiated between primary and secondary drives. The basic need for food, water, and rest, for example, are instincts which Hull considered primary drives, all of which propel individuals toward behavior that will satisfy their needs. When we are hungry, for example, we are driven to find food to satisfy our need for sustenance.

Clearly, however, much of human behavior is not driven by instinctual needs for food or water. Hull proposed the notion of secondary drives to account for behavior that is learned, such as our responses to fear or anxiety. The link between the stimulus (seeing a dangerous animal) and the response (running away) is known as habit strength. According to Hull's formulation, $B \text{ (Behavior)} = D \text{ (Drive)} \times H \text{ (Habit)}$, behavior is determined by both internal need and the habitual response to this need. The habit was usually seen as a mechanistic way in which behavior was learned. However, other behaviorists, such as Edward Tolman, noted that learning is a cognitive process, and that even animals learn to expect a reward (or punishment) when they behave a certain way in a given situation (Tolman 1932). The more often the behavior leads to need satisfaction, the stronger is the habit strength of that behavior. The dependency of habit strength on the previous positive outcomes is known as Thorndike's Law of Effect (1931).

The stimulus-response association came to have important implications in the classroom. B. F. Skinner had shown in experiments with laboratory ani-

mals that positive reinforcement increases the occurrence of wanted behaviors, while negative reinforcement decreases the occurrence of undesirable behaviors (Skinner 1953). Teachers would be able to use these same principles to foster behavior conducive to learning (e.g., point systems) and inhibit behavior that interfered with learning (e.g., punishment systems such as loss of free or play time). Further, these principles could be adapted whether working with children individually or in groups (Skinner 1968).

While drive theories had the advantage of focusing on observed behavior, little or no consideration was given to cognition. In current theories of motivation, which place greater emphasis on the role of meaning-making, behavioral constructs such as habit strength and drive are no longer considered in understanding achievement behavior. Instead, researchers are focused on the interpretation that individuals bring to achievement situations.

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MID-CENTURY THEORETICAL ADVANCES

By the middle of the century, theoretical work in achievement motivation focused increasingly on the relationship between cognition and behavior. Julian Rotter, Robert White, Henry Murray, and John W. Atkinson provided the foundation upon which a more sophisticated understanding of achievement motivation grew.

SOCIAL LEARNING THEORY

Social Learning Theory, as proposed by Julian Rotter (1954), integrated aspects of behaviorism and field theory. He suggested that behavior is learned in social situations, but that cognition is a key component of motivation (Rotter 1954). Like theorists before him, Rotter expressed his theory in mathematical terms, and proposed a formula for predicting achievement behavior. He argued that, in a given situation, behavior is a function of the expectancy that there will be reinforcement for that behavior, and

the value the individual places on this reinforcement. Rotter's theory conceives of individuals as developing expectations for success or failure based on previous experiences with similar tasks, and behaving accordingly and with respect to how much they value the expected outcome. For example, a student may decide to endure a difficult elimination process to compete for a spot on her school's math team if she expects that she will receive praise from her parents, and values this parental praise.

Rotter's conceptualization of internal versus external control of reinforcement, or locus of control, represented a major advance in the field. Rotter's interest in this construct grew out of his observations that changes in expectancies after reinforcements seemed to vary systematically, both as a function of the situation and the characteristics of the individual. He argued that people differ in their tendency to see events as under their personal control (internal locus of control) or under control of the external circumstances which are unpredictable (external locus of control), such as luck or the influence of powerful others (Rotter 1966). The application of this construct to achievement situations is clear. The extent to which students perceive school outcomes to be controllable influences their expectancies for success or failure. A student who believes his high grades are the result of hard work and careful preparation (controllable factors) will expect similar success in the future. In contrast, a student who perceives that his poor performance is the result of a teacher's vendetta will expect continued failure. More specifically, locus of control influences actual learning, motivation, and achievement behavior. Students with internal locus of control tend to try harder and persist more in the face of difficulty than those who believe they have little control over their achievement outcomes. These engaged learning behaviors tend to result in higher achievement. The concept of locus of control has been incorporated and extended in the work of several theorists, including Bernard Weiner, whose Attribution Theory is described further on.

EFFECTANCE MOTIVATION

In a related advance for the field of achievement motivation, Robert White noted that the exploratory

behaviors that are regularly observed in animals and humans cannot be adequately explained by instinct or drive theories. According to White, persistent behaviors, such as those involved in learning to walk, represented a new kind of motivation—effectance motivation (White 1959). In essence, we are motivated by an inherent need to master and influence our environment. Effectance motivation in infants and toddlers was seen as being rather global and focused on objects in their immediate surroundings (such as grabbing and examining a colorful stuffed animal). White suggested that as children grow, effectance motivation becomes targeted at mastering increasingly complex tasks, such as those required in a classroom or athletic field. White's theory provided a crucial basis on which theories of intrinsic and mastery motivation have been subsequently developed. This work greatly influenced the theories of Susan Harter, Edward Deci, and Richard Ryan, discussed in a later entry.

ATKINSON'S EXPECTANCY-VALUE MODEL

John W. Atkinson was greatly influenced by Henry Murray's Need for Achievement Theory (Atkinson 1957). Murray proposed that individuals possess a number of basic human needs, such as the need for affiliation, the need for power, and the need for achievement. Murray defined the need for achievement, in part, as a need to accomplish difficult tasks well, and in the process, gain a sense of self-esteem. One major contribution of Murray's work was his development of an assessment technique—the Thematic Apperception Test (TAT)—that measured the extent to which need for achievement played a major role in individuals' ideation. The TAT consists of a series of cards, on which are depicted various scenes which are purposely ambiguous. One picture, for example, depicts two women, one younger and one clearly older, in lab coats in a laboratory setting. Respondents are asked to compose a story, at least fifty words in length, describing what is transpiring in the scene. These stories are then coded or scored for their level of achievement-related ideas, and related to achievement variables, such as school outcomes or persistence.

Early in his work, Atkinson's model was referred to as a "risk-taking" model because it considered the

probability that an individual would weigh the probability of success or failure against his estimate of the relative difficulty of the task (Atkinson 1964). In this regard, Atkinson integrated Murray's theory with the work of Edward Tolman (1932), whose notion of expectancy for success evolved from his studies of maze learning among rats, and Lewin's views of valence (the attractiveness of a goal) and level of aspiration. Atkinson noted that motivational tendencies are aroused whenever success or failure is an issue. While task difficulty is situationally determined, Atkinson argued that the strength of the motive to achieve or to avoid failure is rooted in individual personality.

According to Atkinson, the immediate environment presents what he termed instigating or inhibitory influences that serve to arouse an individual's tendency to approach or avoid a task. If an activity is interesting, or is rewarded, it will become the instigating force in behavior. In contrast, if the individual has a negative history with the activity, or has been punished for engaging in it, it will become the inhibitory force, and increase the individual's desire not to engage in the activity.

Atkinson's distinction between the tendency to approach or avoid achievement-related goals (T_s) was an important advance for the field. His formula for predicting behavior proposed that achievement behavior is a multiplicative product of the need for achievement, or the motive for success (M_s), the probability that one will meet with success (P_s), and the incentive value (I_s) that the success has for the individual. Affect figured prominently in Atkinson's theory. Specifically, he argued that success leads to feelings of pride in one's accomplishment, especially if the task is a difficult one. As we will see further on, affect came to hold an increasingly prominent place in achievement motivation theories.

Inasmuch as individuals come to anticipate positive affect for tasks with which they have experienced success and resulting feelings of pride, Atkinson argued that they also come to anticipate negative feelings from tasks with which they have experienced failure and the shame that ensues. Parallel to expectancies for success, Atkinson suggested that fear of failure would result in the tendency to avoid failure (T_{AF}). He proposed that this tendency (T_{AF}) was the multiplicative product of the need or

motive to avoid failure (M_{AF}), the probability that failure would occur (P_f) and the incentive value of failure (I_f)—shame.

Overall, Atkinson proposed that the tendency to either approach or avoid an achievement-related task was equivalent to the tendency to approach a task minus the tendency to avoid it, or $T_A = T_s - T_{AF}$. In order to account for the fact that individuals seek achievement-related tasks for reasons that may have little to do with fulfilling a need (such as a desire for external reward), Atkinson proposed ultimately that achievement behavior is the result of the tendency to approach a task plus extrinsic motivation (Achievement Behavior = $T_A + \text{Extrinsic Motivation}$). While he used the TAT to measure need for achievement, or what he called the Hope of Success, he assumed that the tendency to avoid failure, or Fear of Failure, was a separate motive that tapped into anxiety. Thus, he used the Test Anxiety Questionnaire (TAQ) to measure its strength.

Atkinson's theory suggested that individuals with relatively stronger motive for success than motive to avoid failure would be attracted to tasks that were neither too easy nor too difficult; in other words, optimally challenging tasks. In contrast, individuals with a stronger motive to avoid failure than motive for success would prefer tasks that were too easy or too hard. As has been summarized elsewhere, outcomes on these kinds of tasks tended to support Atkinson's theory, but their applicability in naturalistic classroom settings was not as clear (Pintrich and Schunk 2002). Research moved forward in ways that would consider classroom learning more directly.

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CONTEMPORARY THEORIES OF ACHIEVEMENT MOTIVATION

The study of achievement motivation has advanced considerably from its early focus on needs and drives to the introduction of cognition and affect into theory and research. Over the past forty years in particular, our understanding of the motivational factors underlying students' achievement behavior has deep-

ened considerably. This is largely due to the integration of social cognition with principles of achievement motivation theory. Social cognition recognizes the mutual relationship between the environment and the interpretation individuals bring to bear on their interactions in their environment. In other words, our social context influences our understanding of events, which then come to influence our interactions with our environment.

For researchers in achievement motivation, this has meant an increased attention to the complex constellation of beliefs, attitudes, and emotions that guide the interpretation of achievement experiences. In building on earlier work, contemporary theorists have shed the mathematical formulations that sought to predict achievement behavior and focused on different aspects of the meaning-making process. The result is a more detailed and context-specific understanding of why students are oriented toward some goals and not others, how they come to judge their abilities, and the circumstances under which they will initiate learning, show persistence over time, maintain their interest, and renew their efforts in the face of discouragement.

Researchers who have examined advances over the past few decades have found that it useful to conceptualize the various avenues of inquiry as three primary questions, and we follow this conceptualization here as well (see J. S. Eccles, Wigfield, and Schiefele 1998). The question, “Can I do this task?” is one in which issues of ability are salient. The question, “Do I want to do this task?” is specific to the value that students place on a given task and the interest they show in the activity. Finally, the question, “What do I have to do to succeed at this task?” is being addressed by researchers interested in how children come to monitor and regulate their learning experiences

CAN I DO THIS TASK?

Research on attribution theory, self-concepts of ability, goal theory, and self-efficacy beliefs are all focused on the ways in which students judge their abilities to perform a task.

Attribution Theory

Bernard Weiner’s Attribution Theory was a major advance in our understanding of achievement be-

liefs and behaviors. Weiner was greatly influenced by Rotter’s Social Learning Theory, and in particular, his construct of locus of control (Weiner 1992). Weiner’s research into the attributions, or reasons, that people bring to bear in understanding their performance outcomes served to refine Rotter’s general constructs of “internal” and “external” locus.

According to Weiner, individuals are motivated to answer the questions: Why did I fail? Why did I succeed? Why didn’t I do better than I expected? In pursuit of answers, Weiner has proposed that individuals engage in an implicit analysis of the reason(s) for their performance outcomes. Taking into consideration antecedent conditions, such as previous test grades and teacher feedback, children as young as five years of age tend to attribute success or failure, broadly speaking, to effort (or lack of it), ability (or lack of it), and external factors, such as luck or task difficulty. These attributions vary along three causal dimensions—locus (internal or external), controllability, and stability. According to Weiner, effort is perceived as internal, controllable, and unstable. Ability is perceived as internal, uncontrollable, and stable. Finally, factors such as luck or task difficulty are perceived as external, uncontrollable, and unstable. Further, each attribution is linked with a specific emotional reaction, and it is the emotional reaction that predicts achievement behavior.

For example, suppose Jonathon believes that he failed his math test because he is simply bad at math, something he feels cannot change and over which he feels he has no control. This belief will likely result in his feeling ashamed, which may lead him to avoid preparing adequately for the next test. Suppose, however, that Jonathon were to attribute his poor performance to lack of effort. Knowing that he would have done better if he had studied harder is likely to make him feel embarrassed. His embarrassment will most likely lead him to prepare earlier and more effectively for the next test.

Importantly, Weiner has demonstrated that children as young as five years of age are able to infer casual attributions from a teacher’s emotions, and vice versa. When read scenarios depicting a teacher’s anger at a student’s poor grade, children infer that the teacher attributes the pupil’s grade to lack of effort. In contrast, if the teacher is said to pity a stu-

dent who performed poorly, children will infer that the teacher attributes the low grade to lack of ability (Weiner et al. 1982).

Similarly, when presented with a teacher's attribution, even young children correctly infer the teacher's emotions. For example, when told that a teacher believes a student has not tried hard enough, children predict that the teacher will be angry with the student. When told that a teacher believes a student lacks the ability to learn, children infer that the teacher will feel pity for the student in question. These findings hold for elementary, high school, and college students.

These findings have important implications for teaching practices. For example, it is natural for many teachers to want to spare children the public awkwardness that comes with not knowing the answer to a question. Some teachers react by quickly moving on to the next pupil, or by providing unsolicited help. According to Weiner's theory, such well-intentioned acts on the part of the teacher may serve to signal a belief that the child lacks ability, something over which they have no control. If these kinds of reactions become a pattern, the unintended consequence may be student self-doubt and loss of confidence.

The relationship between attributions for success and failure and academic achievement has been examined largely through surveys. In studies of elementary, high school, and college students, research has shown that higher-achieving students tend to attribute success to ability, and to reject the notion that poor performance results from lack of ability. In contrast, lower-achieving students are more likely to attribute failure to lack of ability or to external causes, such as task difficulty. This tendency places lower-achieving students at greater risk for school failure, in that it indicates the likely belief that they have no control over and cannot change their intelligence (Weiner 1994). As a result, they may be much less likely than their higher-achieving peers to see the value in renewed effort.

Do higher-achieving students develop attributions to ability? Or do attributions to ability foster higher achievement? Correlational studies do not allow any firm conclusion. However, it seems likely that aspects of both come into play in the development of children's understanding of their success and failure experiences.

Goal Theory

Goal theorists, such as John Nicholls (1978), Carol Dweck (1999), and Martin Covington (1984), have focused less on the logical analysis of behavior and more on the goals that individuals pursue in achievement situations. Nicholls and Dweck have argued that the prime motivator of achievement behavior is the desire to demonstrate high ability, or at the least, avoid negative evaluations of ability. Similarly, Covington has proposed the more ego-defensive notion that individuals are motivated by the desire to maintain their sense of self-worth. One of the more interesting lines of research within this theoretical framework examines students' perceptions of the inherent relationship between effort and ability, which is discussed further on.

Nicholls: Task versus Ego Involvement According to Nicholls, children's implicit conceptions of ability are the key to understanding achievement motivation. He found that young children (5–6 years old) tend to hold a view of ability that is undifferentiated, in the sense that they view their ability from a subjective, self-referenced perspective. In other words, they view ability as mastery, and endorse statements such as, "The harder I try, the smarter I get." By the end of first grade and the beginning of second grade, however, many children's views evolve, and they begin to adopt a view of ability that is differentiated. That is, they increasingly define ability objectively, using the performance of others as a reference point. The notion of ability as capacity takes hold, and they begin to endorse statements such as "The harder I have to try, the dumber I must be" (Nicholls 1978).

The development of children's views of the relationship between effort and ability is clearly influenced by the gradual increase of social comparison in the classroom. It is in the second grade when many children have their first experiences with tests and report cards, and as Joseph Veroff has noted, the tendency to compare one's performance to that of others is, to a certain extent, a natural aspect of the self (Veroff 1969). No teacher can reasonably expect that children not focus on the performance of others. There are ways to structure learning, however, that tend to minimize the saliency of social comparison.

Nicholls argued that when classrooms are oriented

toward fostering task involvement—a state in which students are concerned with demonstrating to themselves that they have high ability—students become focused on the process of learning, mastery becomes an end in itself, and learning is intrinsic. In contrast, when classrooms are oriented around ego involvement—a state in which students are concerned about demonstrating to others that they have high rather than low ability—students become focused on the products or outcomes of learning, and learning becomes a means to an end and extrinsic in nature (Nicholls 1989). Not surprisingly, the competitive nature of much of classroom learning tends to foster ego involvement.

In a series of investigations, Nicholls demonstrated that ego involvement fosters work avoidance, a belief that success depends on being smarter than others, and a preoccupation with the need to outperform one's peers. Under these circumstances, students tend to opt for tasks that are either too easy (thus ensuring success) or too hard (thus enabling the student to save face), especially if they have low confidence. Task involvement, though, fosters the belief that success depends on interest, effort, and persistence. Under these circumstances, students tend to prefer realistic challenge, a choice that is most conducive to learning. Regardless of perceived confidence, students operating in a task-involved setting tend to view requests for help as a way of learning.

Recall that, according to attribution theory, ability is perceived as relatively innate—internal, stable, and uncontrollable. Interestingly, Nicholls has shown that, in task-involved settings, students are more likely to view ability as malleable and controllable. Perceptions of ability, then, are not necessarily fixed traits, but rather subject to modification in different situations.

Dweck: Implicit Theories of Intelligence In early research on children's performance in achievement situations, Dweck suggested that children's differential reactions to difficulty might, in fact, be explained by these different implicit theories of intelligence (Diner and Dweck 1978). In a pattern indicative of learned helplessness, Dweck found that, despite experiences with prior success, some children interpreted errors as indicative of lack of ability and predictive of future failure. They made attributions to lack of ability, engaged in ineffective learning strat-

egies, such as perseveration, and displayed negative affect. In addition, children characterized by learned helplessness underestimated their previous successes and overestimated their failures.

In contrast, children characterized by a mastery-oriented, problem-solving approach intensified their efforts in the face of difficulty, did not perceive that their mistakes were indicative of low ability, engaged in effective strategies for improvement, such as self-monitoring, displayed positive affect, and were optimistic about future success on similar problems.

Paralleling Nicholls's constructs, Dweck proposed that children adhere to one of two conceptions of ability. The first, Entity Theory, suggests a view in which intelligence is perceived as a fixed trait than can be evaluated by others as adequate or inadequate. The goal of entity theorists is to display competence, and avoid displaying incompetence. The theory proposes that, when given the choice, entity theorists will opt to complete a task that they know how to do (performance goal), and display learned helplessness if they encounter difficulty. If their confidence is high, they will choose a novel task (learning goal) and display mastery-oriented behavior. The second conception of ability, Incremental Theory, suggests instead the view that intelligence is a dynamic quality of the self that grows as one continues to acquire skills and knowledge (Dweck and Bempechat 1983). Regardless of confidence level, the theory predicts that incremental theorists will opt for learning over performance goals, and display mastery-oriented behavior in the face of difficulty or challenge.

Subsequent research has shown that children's implicit theories of intelligence predict their goals, with entity theorists preferring performance and incremental theorists preferring learning goals. While entity theorists describe an intelligent peer in terms of static traits ("She's smart because she has a big brain."), incremental theorists describe intelligence in terms of the dynamic actions an individual takes ("He's smart because he tries hard.") (Bempechat, London, and Dweck 1991). Entity theorists are more likely to attribute failure to lack of ability, while incremental theorists attribute failure to lack of effort.

More recently, Judith Harackiewicz found evidence that a performance goal orientation is better conceptualized as two distinct notions: performance-approach and performance-avoid (Elliot and Harackiewicz 1996). The reader will recall that

Atkinson made this distinction between approach and avoidance goals in his theory of need for achievement, discussed earlier. In an experimental study, Elliott and Harackiewicz (1996) manipulated puzzle instructions, telling students in the “approach” instruction that their participation would give them the chance to show they had good puzzle-solving skills. Those in the “avoid” instruction were told that their performance would give them a chance to show they did not possess poor puzzle-solving skills. Students in the mastery instruction were told simply that their performance would demonstrate their level of mastery.

Results showed that students in the performance-avoid condition exerted as much effort, valued their self-perception of competence as much, and performed as well as their peers in the performance-approach and mastery conditions. However, they enjoyed the activity less, were less task involved, and displayed less subsequent intrinsic interest in the puzzles. In short, performance goals per se do not undermine intrinsic interest. Rather, performance goals oriented around avoiding the display of incompetence serve to depress interest and enjoyment.

Covington: Self-Worth Theory According to Covington, individuals are motivated by the desire to appear competent, or avoid appearing incompetent. For students, this goal means that their highest priority is to maintain their sense of ability, even if they must sacrifice opportunities to learn in the process. Covington believes that school failure is not indicative of a lack of motivation to achieve. He has argued that passivity is as motivated a behavior as active engagement. According to Covington, an underachieving student is indeed motivated, but this motivation is channeled into protecting his sense of self-worth (Covington 1992).

Covington has argued that, given the competitive nature of classroom learning, where the highest rewards are limited and few, students' sense of self-worth comes to depend on their ability to attain the few rewards that are available. In other words, in school as in society, people's sense of self-worth is tied to their ability to achieve, and conceptions of ability become increasingly salient as children progress through the educational system. Self-worth theory has proved very helpful in understanding achievement behavior that, on the surface, is par-

ticularly vexing to both teachers and parents. Why would a student who clearly has the ability to achieve refuse to complete homework assignments? What sense can it possibly make for a student, who should know better, to take a test for which she has not studied? And why would any student knowingly take on a task that is far too ambitious and cannot possibly be seen to successful completion?

In fact, for students who have low confidence or otherwise feel insecure about their abilities, these and other strategies provide a means by which they can preserve their sense of self-worth. Simply put, many students may not be able to justify placing their self-worth at risk in an effort to try to succeed. Instead, it may make more sense to try to avoid failure. In this context, Covington has argued that school learning involves a “profound conflict of values” between effort and ability, in the sense that while effort increases the probability of success, its mere exercise is an implicit condemnation of ability. In a well-known study, Covington asked college students to report the extent to which they would feel shame and incompetence after experiencing failure under four conditions: low effort, with no excuse; low effort, but with an excuse; high effort, with an excuse; and high effort, with no excuse (Covington and Omelich 1979). Students reported feeling the most shame and incompetence in the high effort, no excuse condition. They reported feeling the least shame and incompetence in the low effort-excuse condition. For many students, effort is indeed a “double-edged sword.”

The conflict that between the importance of effort and the need to protect self-worth is played out in a repertoire of self-protective strategies intended to avoid negative evaluations of ability. In a classroom, for example, students can work to minimize active participation in discussions or question and answer sessions. Students can also engage in what Covington calls “self-handicapping” behaviors, approaches designed to guarantee failure, but under the guise of socially acceptable excuses. Students who procrastinate can claim that they simply did not have enough time to complete the work satisfactorily. Those who are perfectionists find they run out of time, not because of poor organization, but because their standard for acceptable work is simply too high ever to be reached. Some students consistently set goals that are unattainable. When they fail, they do so “with honor,” in the sense that they can be per-

ceived as having tried hard under difficult circumstances. Finally, there are students who purposefully underachieve. They actively refuse to do any work or study for any exam, under the pretense that they do not want to conform to other people's rules and expectations.

At the end of the day, so to speak, Covington argues that students who engage in these self-protective strategies are far from conflict free. Indeed, their underlying concern about their ability to achieve endures. In this sense, these students' strategies for avoiding failure may protect their sense of self-worth in the short run, but in the long run they will have failed, both to learn and to develop adaptive means of coping with achievement-related anxiety. In fact, students need not be so consumed with avoiding the possibility of failure. Covington has argued that a re-thinking of classroom structure and learning can alleviate the anxieties experienced by many students. Cooperative settings, in which issues of ability are less salient, can make a positive difference for many students.

DO I WANT TO DO THIS TASK?

Children's interest in and value they place on performing a given task are at the center of Expectancy-Value theory, intrinsic interest, and research on self-determination.

Expectancy-Value Theory

The Expectancy-Value theory of achievement motivation argues that achievement beliefs and behaviors are determined jointly by the expectancy one has for success and the value one places on succeeding. The theory has its roots in Atkinson's (1957) early research, in which he suggested that, in achievement situations, individuals anticipate that their performance on a given task will result in success or failure. According to Atkinson, the value of a given task is determined by its attractiveness to the individual.

Over the past twenty-five years, our understanding of both the components and development of expectancy beliefs and task value has grown considerably, largely due to the research program of Jacquelynne Eccles, Allan Wigfield, and their colleagues (see (Wigfield and Eccles 2002). Their model,

first presented in 1983, proposed that children's achievement-related choices, performance, and persistence are influenced most directly by their expectations for success and the subjective value that they place on a given task (Eccles et al. 1983). Expectations are said to be influenced by children's goals and self-schemata, including their self-perceptions of ability. In this model, the value that children place on a task is influenced by their affective memories of experiences with similar tasks, as well as their goals and self-schemata. The latter are said to be influenced by their own attributions for success and failure, the achievement beliefs, expectancies, and values of their parents and teachers, and gender-role stereotypes. All of these components are proposed to be influenced, at a very broad level, by the cultural context in which children live, their parents' overall socialization beliefs and practices, and the differing aptitudes they bring to a given task.

Over two decades of research, and largely through questionnaire studies, Eccles and Wigfield and their colleagues have charted the development of and changes in self-perceptions of competence, expectancies for success, and achievement task values in elementary, middle, and secondary school students. For example, in a study of fifth through twelfth graders, Eccles and Wigfield focused specifically on students' subjective task value (Eccles and Wigfield 1995). They found that at all ages, students distinguish between three aspects of subjective task value, all of which are positively correlated—interest in the task, perceived importance of the task, and the perceived utility of the task. The students also distinguished between the components of task value and their self-perceptions of ability and judgments of task difficulty. Importantly, they demonstrated that self-perceptions of ability and task value are positively related to one another, but negatively related to judgments of task difficulty. In other words, students value a task if they perceive they are good at it. They are less likely to perceive they are good at it if they have difficulty doing it, and they tend to devalue its importance if they think it is a difficult task.

In both correlational and longitudinal research, Eccles and Wigfield and their colleagues have found that self-perceptions of competence and expectancies for success decline as children grow. For example, Wigfield studied changes in self-perceptions of competence and general self-esteem in the tran-

sition to junior high (Wigfield et al. 1991). He documented a decline from the sixth to the seventh grade in self-concepts of competence and liking in the four domains on which he focused (math, English, social activities, and sports). By the seventh grade, self-concepts in sports and social activities rose, while self-concepts in math and English did not. Students' liking of English and social activities, but not math and sports, rose in the seventh grade. Finally, Wigfield found that students' general self-esteem took a temporary dip immediately after the transition to seventh grade, but rose again, indicating a recovery of sorts from the difficult adjustment period from elementary to junior high school.

Why would students' self-perceptions of ability in math and English decline during this transition period? Eccles and her colleagues have proposed that the major structural differences that distinguish elementary from junior high school are likely responsible. When students go from contained classrooms to multiple teachers, they report less warmth in their relationships with their teachers. In addition, teachers report feeling less effective in junior high than in the elementary school setting. And, in the context of the previous discussion of goal theory, students are subjected to stricter evaluations in their junior high classrooms, where issues of ability become even more salient and social comparison more apparent.

More recent work on the Expectancy-Value model has focused on the relationship between self-perceptions of competence and the components of subjective task value. In other words, how are competence beliefs associated with perceptions of a domain's usefulness, importance, and interest? In a longitudinal study of elementary school students, Wigfield and Eccles examined these relationships in four domains—English, math, instrumental music, and sports (Wigfield et al. 1997). Over time, children's perceptions of the usefulness and importance of these domains decreased. Of the four domains, students rated reading and math as the most important. Across the domains, however, self-perceptions of competence were associated more with intrinsic interest and less with the perceived usefulness of the domain, a finding also reported by Eccles and Wigfield (Eccles and Wigfield 1995). These researchers also found that a stronger relationship between beliefs about math competence and perceived

importance than between math competence and perceived usefulness.

Naturally, many researchers are interested in the relation between children's achievement beliefs and their achievement behaviors, including the tasks they choose to pursue, the persistence they display in their work, and their actual grades or achievement outcomes. In early longitudinal research, Eccles reported that self-perceptions of math and English ability predicted grades, over and above what was predicted by previous grades (Wigfield 1994). In a large sample of fifth through twelfth graders, expectancies for success were better predictors of students' grades than their subjective task values. Further, the extent to which they valued math predicted their intention to enroll in subsequent math courses more than their expectancies for success. Among eighth through tenth graders, valuing math predicted actual course enrollment in advanced math courses in junior high school.

Taken together, the accumulated findings emanating from research on Expectancy-Value theory provide compelling evidence that children's expectations for success and the value they place on succeeding play a critical role in the development of their achievement beliefs and behaviors.

Bandura's Self-Efficacy Theory

Expectations play a critical role as well in Albert Bandura's self-efficacy theory. Grounded in the principles of social learning theory, self-efficacy is the "core belief that one has the power to produce desired effects" (Bandura and Locke 2003, 87). By the early 1980s, Bandura had become interested in the processes that mediate an individual's knowledge of a task and the action needed to execute the task (Bandura 1982). He noted that individuals may not do well, even though they may know exactly what to do. He argued that this gap between knowledge and action was mediated by self-referent thoughts—the judgments people make about their experiences and their thought processes. According to Bandura, self-efficacy involves integrating cognitive, social, and behavioral skills in order to judge one's capability to accomplish a task. In keeping with social learning theory, self-efficacy theory views the individual as an active participant, not a passive observer of events. In other words, as Bandura proposed, individuals set future goals, make plans to meet these goals, antici-

pate possible outcomes, and engage in self-evaluation throughout the process (Bandura 1991).

In general, self-efficacy is influenced by individual qualities, such as ability, previous academic experiences, and social support for learning. As students begin to engage in a task, they are influenced by personal factors (their goals), as well as situational factors (the difficulty of the task). Both provide valuable information that allows students to evaluate their progress. If they judge that they are making good progress, then their self-efficacy will increase. Importantly, failure does not necessarily result in lowered self-efficacy. Dale Schunk has shown that as long as students believe that they can improve their performance by adjusting their learning strategy, self-efficacy will not diminish (Schunk 1995).

Bandura identified two important components of expectations. "Outcome expectations" refer to the fact that people regularly anticipate possible outcomes of different actions and behave in ways that maximize the chance that they will attain the desired outcome. Efficacy expectations are people's evaluations of whether they have the ability to perform the task in question. Self-efficacy beliefs influence whether individuals will think about tasks in a positive, self-enhancing manner or in a negative self-defeating way.

According to Bandura's model, it is most optimal for people to have self-efficacy and high outcome expectations. Under these circumstances, individuals are more likely to feel confident, apply themselves, and be persistent in the face of difficulty. It is least helpful to have low self-efficacy and low outcome expectations. Individuals with poor perception of their ability to be successful, coupled with low expectations for success, are likely to be at risk for learned helplessness. Equally, if not more disconcerting, are those who have low self-efficacy, but high outcome expectations. Students who have little faith in their ability to manage a learning situation but hold themselves to high standards place themselves at risk for depression. It is of course possible to have high self-efficacy, but low outcome expectations. A student who studies hard but expects a mediocre grade may become increasingly frustrated with external influences, such as a teacher's grading practices.

A great deal of research has shown that self-efficacy beliefs predict goal choices, the level of effort

one expends, and the strength of persistence at the task. Simply put, individuals high in self-efficacy choose more challenging tasks, try harder, and persist longer. For example, in a questionnaire study, seventh graders responded to questions about their motivation (including questions about their self-efficacy beliefs), their cognitive strategies (e.g., study techniques, rehearsal strategies), and their meta-cognitive strategies (such as planning), and their effort on tasks (Pintrich and DeGroot 1990). Results showed that self-efficacy was positively correlated with cognitive engagement and performance. Specifically, relative to students with low self-efficacy, those with high self-efficacy were more likely to use cognitive strategies in learning, engage in more self-regulation, report persisting more at boring tasks, and had higher grades. This pattern was unrelated to prior achievement, intrinsic interest, or test anxiety.

While self-efficacy was unrelated to performance, cognitive strategies were related to grades. This suggests that teaching cognitive strategies may improve achievement, but that enhancing self-efficacy beliefs may lead to more cognitive engagement in self-monitoring and strategizing, which in turn, will foster higher achievement.

Theories of Intrinsic Motivation

Why are individuals motivated to seek out challenging and intellectually stimulating tasks? This fundamental question about intrinsic motivation has been the source of theory, research, and debate. Attempts to address this query are made even more compelling by considerable evidence that children's early enthusiasm and intrinsic interest in learning declines considerably, as early as the third grade. What is it about the structure of formal schooling that might contribute to this disturbing trend? Recall White's (1959) early suggestion that individuals have a basic need to feel competent. This idea has been refined over the past two decades to include the notion that individuals also need to feel autonomous and have some measure of control in their educational experiences in order to maintain an intrinsic interest in their learning. Not surprisingly, a good deal of research has focused on the nature of rewards in the classroom, under the assumption that their use may deprive students of a sense of control over their learning.

Susan Harter's model of Mastery Motivation represents the first refinement of White's work, in the sense that she examines antecedents and consequences between mastery attempts in the context of success and failure experiences. Importantly, she has argued the need to examine these relationships separately for different domains of the self (academic, athletic, etc.) (Harter 1978). In keeping with holistically grounded approaches to studying motivation, Harter's model includes factors in the learning context that are influential, including reinforcement from socializing agents (parents and teachers) and reward systems. In particular, the model proposes that mastery attempts that are met with success and are positively reinforced will result in internalization and foster a sense of self-competence. This will serve to foster enjoyment and intrinsic interest, which will then enhance effectance motivation. Further, over time, the need for external approval will diminish. In contrast, if students experience failure, and parents react to their disappointing performance with a lack of reinforcement or with disapproval, this will serve to increase anxiety, lower perceptions of competence, and increase dependence on external approval. All of these outcomes will likely lead to a decrease in mastery motivation.

Richard deCharmes focused on personal causation as a means to examine intrinsic motivation, arguing that individuals who feel that they can control their outcomes will take more initiative and display sustained interest in their learning (deCharmes 1984). He used the terms "origins" and "pawns" to describe the difference between students who feel that they can have an impact on their environment (origins) and those who feel that they cannot (pawns). DeCharmes proposed that a sense of personal causation will lead origins to believe that their learning behavior and outcomes are under their control, thus fostering a strong sense of responsibility, intrinsic interest in learning, and a commitment to activities that they value. In contrast, pawns are seen as perceiving that their learning behavior and outcomes are under the control of others, leading to feelings of helplessness, task avoidance, and diminished interest in learning.

DeCharmes engaged in naturalistic intervention in order to test his theory of personal causation. He conducted a longitudinal investigation in which he trained teachers to foster origin beliefs and behav-

iors in their students and classrooms. This training focused on enhancing students' self-concepts, sense of responsibility, intrinsic motivation, and personal responsibility. Student choice in tasks and goal setting were key ingredients in origin training, but did not imply a laissez-faire classroom climate. Teachers provided a firm structure in which they determined the range of choices available to students. When deCharmes compared the achievement beliefs and behaviors of students in origin training and control classrooms (no origin training), he found that the origin-trained students set their own goals, were more realistic in their goal setting, determined their own instrumental activities, took more personal responsibility for their actions, were more self-confident, and had higher academic outcomes. These findings were sustained over time, providing evidence that a sense of personal causation can indeed foster adaptive learning beliefs and behaviors.

Self-Determination Theory also has its roots in White's early research on effectance motivation. Following deCharmes, Edward Deci and Richard Ryan proposed that individuals have an intrinsic need to feel competent and in control of their learning experiences—that their behaviors are self-determined (Deci and Ryan 1985). In this context, rewards for learning in the classroom can be seen as controlling and problematic for the development of intrinsic motivation. Experimental evidence for the potential of extrinsic rewards to undermine intrinsic interest was first offered by Mark Lepper and his colleagues (Lepper, Greene, and Nisbett 1973). They proposed the "overjustification hypothesis"—that students' intrinsic interest in an activity may be undermined by encouraging them to engage in the activity in order to obtain a reward.

In his well-known study, Lepper defined a target activity as drawing with colorful marker, and made these available to preschoolers. In a baseline measure of intrinsic interest, he observed the amount of time children drew with the markers. Lepper then asked the children to draw a picture for an adult under one of three conditions: no reward (control group), expected reward (children were told they would receive a reward for drawing the picture), and unexpected reward (children received a reward for drawing, but had no idea it was coming to them). Children who expected the reward spent less time engaged in the activity than children in the other two conditions, and

compared with the amount of time they had played with the markers during the baseline period. Further, the quality of their pictures, as judged by adults who were blind to the experimental conditions, was poorer than those of children in the other conditions.

This study prompted a great deal of debate about the extent to which rewards in the classroom (grades, tangible prizes, verbal and nonverbal approval) may undermine children's natural and intrinsic interest in learning. Deci and Ryan (1985) have argued that in order to understand the effects of a reward, it is important to have some knowledge of how students interpret the reward, or its functional significance (Deci, Koestner, and Ryan 1999). Students are said to interpret the functional significance of rewards in two basic ways: its effect on their sense of self-determination, or autonomy, and their self-perceptions of competence. According to their Cognitive Evaluation Theory, at their most basic level, rewards are interpreted as either controlling of their behavior or indicative of their competence level. If rewards are perceived as controlling, an external locus of control will be fostered and intrinsic motivation will be undermined. If instead rewards are perceived as providing information about competence in a positive, task-involved way, then students' sense of self-determination and perceptions of competence will be enhanced, thus fostering intrinsic motivation. However, when positive feedback is delivered in an ego-involved fashion, it will be perceived as controlling, and intrinsic motivation will decrease.

In a comprehensive review, Deci and his colleagues concluded that tangible rewards decisively reduce intrinsic interest in learning by interfering with self-regulated learning, essentially undermining students' ability to take control and learn to motivate themselves (Deci, Koestner, and Ryan 1999). However, it is critical to have an understanding of the contingencies under which rewards occur. Generally, if rewards are unexpected, they have little effect in intrinsic motivation. If rewards are expected, the results on intrinsic motivation differ as a function of the type of reward. When rewards are task-noncontingent (dependent on simply participating in and not necessarily engaging in a task), there tends to be no effect on intrinsic motivation. When rewards are task-contingent (dependent on either engaging or completing a task) they tend to be perceived as controlling. While

the demand to complete a task is viewed as more controlling than simply participating, it is possible that the competence feedback that accompanies task completion may serve to attenuate the negative effect on intrinsic interest. However, rewards that are performance-contingent (dependent on matching a standard) are most strongly perceived as controlling, since there is clear pressure to meet an expectation in order to receive the reward. Its effect on intrinsic interest is the most undermining of all the reward contingencies. Again, however, for those students who meet the expected standards, the positive feedback may minimize the undermining effect of the reward.

WHAT DO I NEED TO DO TO SUCCEED?

Research on cognitive strategies and self-regulation are at the fore in attempts to address this fundamental question. Self-regulated learning is grounded in Bandura's social learning theory, and is seen as being determined by a mutual and reciprocal interaction between students, their environment, and their behavior (Zimmerman 1989). For example, a student may decide that there are too many distractions in her kitchen to allow for valuable study. If she decides to move to another, quieter part of the house, she will, over time and as a result of how much better it is to work elsewhere (self-feedback), evaluate the effectiveness of this change over time, and make further adjustments as she feels they are needed.

Paul Pintrich has suggested that self-regulated learning consists of four phases that students engage in as they encounter a task. He notes that these are not necessarily linear or explicit, but rather reflect a heuristic to understand research on self-regulated learning. According to Pintrich and Schunk (2002), students are thought to first engage in some sort of forethought and planning that sets learning in motion. They monitor their performance during the task and attempt to control the outcome during the process. They then react to and reflect upon their performance.

What gets self-regulated? According to Pintrich and Schunk, cognition, motivation/affect, and behavior are all subject to self-regulation at each of the four phases in the process of learning. For example, at the control phase, students select and adapt cognitive strategies for mastering the task at hand (cognition). They then

select and adapt strategies for maintaining their motivation and affect while they are engaged in the task (motivation). While they attempt the task, they can choose to persist (or give up) and ask for help (behavior). All of these attempts at control are subject to contextual influences. That is, the type and quality of support available to students changes, there is variation in demands that a task places on students, and differences in how tasks are evaluated. These contextual influences play a unique role in students' attempts to self-regulate their learning.

In Zimmerman's conceptualization, meta-cognition—"the decisionmaking processes that regulate the selection and the use of various forms of knowledge"—plays a central role in the ways in which children come to monitor, evaluate, and adjust their learning (Zimmerman 1989). According to Zimmerman, self-regulated learning involves the active participation of students at three levels: (1) meta-cognitively, where students monitor and adjust their performance as a result of feedback; (2) motivationally, where self-regulated learners evaluate their intrinsic interest, their self-efficacy beliefs, and their perceptions of autonomy as they perform a task; and (3) behaviorally, where self-regulated learners select or create conditions that will maximize their learning, and modify these to meet their needs. Students who engage in self-regulated learning actively initiate and target their attempts to increase their skills and knowledge. While they may consult with their teachers or parents, they are not dependent on them to direct their efforts.

Zimmerman argues that self-regulated learning strategies involve the use of specific strategies whose aim is to enhance skills and knowledge in the context of self-efficacy beliefs. Self-regulated strategies include self-evaluation, organizing, goal setting, planning, structuring the environment, and help seeking. In keeping with social learning theory, Zimmerman has argued that self-regulated learning is determined by the interrelationship between personal (self-efficacy beliefs), environmental (physical environment and social experiences), and performance-related (self-evaluation and self-judgments) factors.

The environmental and social influences in Zimmerman's model speak to the context in which learning takes place. All learning experiences are accompanied by feedback about the quality of students' participation and performance. When students are rewarded for improvements in their performance,

their self-efficacy beliefs increase. And, there is an association between the self-regulation of learning and self-efficacy beliefs. Students who are higher in self-efficacy engage in more self-monitoring and display more effective learning strategies. But what about students who do not seem to know what they should do to try and improve their performance? Zimmerman has shown that modeling of strategies, especially when accompanied by verbal encouragement, can have a profound impact on self-efficacy beliefs, even among students with a history of school difficulty and failure (Zimmerman, Bandura, and Martinez-Pons 1992).

One aspect of self-regulated learning that has received research attention is help seeking. Recall that, according to goal theory, help seeking for some students may be tantamount to an admission of lack of ability. Yet, it is clearly very adaptive for students to be able to identify the point at which they need help, and then actively seek it. Richard Newman has defined adaptive help seeking as involving three related components. From a cognitive perspective, students need to know when they need help, and then what kind of help to ask for, so that their needs will be met. From a social perspective, students need to know that they can indeed ask for help, and need to be able to identify individuals who can help them. From a motivational perspective, students need to identify goals for themselves and possess attitudes that will foster learning, such as a willingness to attempt challenging tasks and admit the need for help (Newman 1990a).

In a study of third, fifth, and seventh graders, Newman examined the relationship between perceived competence, intrinsic/extrinsic motivation, and help-seeking behavior. He found that while students at all ages recognized the benefits of asking for help, they also expressed concerns about being embarrassed by the need to ask for help. However, students with greater perceptions of self-competence were less likely to believe that there were negative costs associated with asking for help. This implies that those most in need of help may be the least likely to seek it. Newman's vulnerability hypothesis of help seeking suggests that students with lower self-esteem feel a more urgent need to preserve their self-worth, and may consistently avoid situations where they risk failure (Newman 1990b).

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THE SOCIALIZATION OF ACHIEVEMENT

A great deal of research is focused on the ways in which parents socialize their children for the role of student. This work considers both how parents prepare their children intellectually for formal learning, as well as the ways in which they communicate their beliefs and attitudes about learning and schooling. As we show, much of the current research places culture and context at the center of investigations on family influences in achievement and motivation.

DEMOGRAPHIC INFLUENCES

There are certain demographic characteristics of families that serve to put children at risk for school failure. These include poverty, low parent education, single parenting, and ethnic and language minority status. The stresses associated with poverty may leave many parents short on the time and energy they need to plan and foster intellectual skills in and out of the home. Parents who are high school dropouts may themselves have had very negative educational experiences, which may make them less likely to trust in the school and its agents. They may thus be less likely to foster beliefs about learning that are adaptive for future success. Relative to higher-educated parents, those with lower levels of education tend to have lower expectancies and hold their children to lower standards for behavior and academic achievement. Finally, ethnic minority parents, including those who speak a language other than English at home, may experience a discontinuity of values between school and home and may thus find it difficult to support the school's goals for their children (Eccles, Wigfield, and Schiefele 1998).

These factors operate to influence school achievement and motivation indirectly, but are not necessarily predictive of underachievement. Many protective factors operate to offset the potentially debilitating effects associated with poverty and other risk factors. These include powerful mentors, strong schools, and individual resiliency, all of which can propel children to dedicate themselves to school success. For example, Charles Harrington's retrospective study of successful African American female

professionals showed that, in many cases, their interest in learning and in furthering their education had been recognized and nurtured by an involved and caring teacher (Harrington and Boardman 1997). These women developed a strong sense of altruism and a desire to help others, partly as a result of these mentoring experiences.

EARLY RESEARCH

Children's achievement beliefs and behaviors are profoundly influenced by the ways in which their parents socialize them for learning and schooling—their educational socialization practices. From actual teaching and household rules to attitudes about the importance of education, parents' educational beliefs and behaviors guide their educational socialization practices with their children, which in turn have a causal influence on their children's developing beliefs. However, parents' beliefs do not develop in a vacuum. They evolve in personal, social, and cultural contexts, all of which interact to influence parents' beliefs and behaviors around their children's schooling.

Early research into this issue was grounded in the "need for achievement" tradition. In a now classic study, Bernard Rosen and Roy D'Andrade found that, relative to boys with low need for achievement, those with high need for achievement had parents who had higher expectations, were more nurturing, and had more confidence in their sons' abilities to succeed (Rosen and D'Andrade 1957). For example, in a problem-solving task, the parents of boys with high need for achievement were more actively encouraging and praised their sons more for their performance. These parents' behaviors were seen as fostering initiative and independence in learning.

Diana Baumrind's later research on childrearing practices suggested that authoritative parenting, in which parents are democratic and warm, but firm, was associated with optimal achievement motivation (Baumrind 1971). This was contrasted with authoritarian parenting, in which parents maintain strict control in a non-nurturing fashion and allow little room for discussion about household rules. At the other end of the spectrum was permissive parenting, in which parents were very warm and nurturing, but made little demands for maturity.

Children of authoritative parents were found to

be independent, assertive, cooperative, self-reliant, and highly motivated to achieve. In contrast, children of authoritarian parents tended to lack vitality and girls in particular were very dependent on their parents and lacked achievement motivation, while children of permissive parents tended to lack self-control. Interestingly, both authoritarian and permissive parents, in their own ways, tended to shield their children from stress. Authoritarian parents greatly restricted their children's experiences, while permissive parents tended to protect their children from the consequences of their own behaviors. As we will see later on, a certain amount of intellectual stress may be necessary for the development of adaptive coping mechanisms.

COGNITIVE AND MOTIVATIONAL SOCIALIZATION

In some families, the socialization of achievement operates in ways that produce a relative match between the child's learning skills, attitudes, and motives, and the demands of the school. In other families, the socialization of achievement is such that children have difficulty realizing their potential, develop poor attitudes, low expectations, and maladaptive achievement behaviors. Researchers seeking to address family influences in achievement motivation have followed two primary lines of inquiry. The first, broadly conceived as cognitive socialization, is concerned with how parents foster the development of their children's intellectual skills. The second, motivational socialization, is focused on the ways in which parents foster the development of beliefs and attitudes that are conducive to learning. Both are aspects of parent involvement and operate in tandem to facilitate or inhibit adaptation to formal schooling.

Cognitive Socialization

Early research in cognitive socialization tended to focus on general issues, such as whether or not parents provide their children with tutoring when they need it. Since the 1950s, research on cognitive socialization has focused heavily on parent-child (usually the mother) interactions, and is grounded in the cognitive developmental theories of Lev Vygotsky and Jean Piaget. Due to the pragmatic difficulties of interviewing fathers, most research has focused on the

mother-child dyad. The underlying assumption is that parents function essentially as teachers, and that their behavior with their children is contingent on the specific contexts in which they interact. Instruction is not necessarily explicit. Rather, parental teaching is embedded in daily life, and occurs in subtle and indirect ways. For example, many parents are unaware that they are teaching aspects of categorization skills when they have their children help them put away groceries (e.g., canned fruit goes on the middle shelf, but canned vegetables go on the bottom shelf).

Irving Sigel proposed the construct of distancing to examine the ways in which parents foster the development of abstract thinking. According to Sigel, distancing is the separation of the individual from the immediate present, and is critical for the development of representational skills (Sigel, McGillicuddy-DeLisi, and Goodnow 1992). Sigel suggested that parental distancing strategies vary along a continuum and activate representational thinking in different ways. For example, most parents, when reading a picture book to their children, ask them to observe and label (e.g., "Where is the kitty?" "What color is the rabbit?"). Other parents go further and ask their children to anticipate developments in the story, propose alternatives, or resolve conflict (e.g., "Where do you think the kitty will go next?" "How do you think the kitty and the rabbit can share the food they found?"). It is apparent that observing and labeling are less intellectually demanding than proposing alternatives or resolving conflict. The latter strategies require that children "stretch" their minds in search of answers to parents' questions. Sigel has found that, relative to parents who focus on lower-order activities, those who engage their children in higher-order thinking of this nature foster greater representational thinking skills in their children. In so doing, these parents are helping their children to be better prepared for the beginning of formal schooling.

Through her concept of situated learning, or learning in context, Barbara Rogoff extended Vygotsky's theory of cognitive development to argue that parents implicitly bridge the gap between the unfamiliar and the familiar by guiding and facilitating children's learning. Vygotsky proposed the notion of the zone of proximal development (ZPD), which represents a skill that is just beyond a child's reach (Vygotsky 1978). The ZPD is said to arise from the mutual and dynamic

relationship between adults (experts) and children (novices). Interactions over time result gradually in the child being able to complete a novel task entirely on her own. Rogoff extended this notion by suggesting that parents are critical in helping their children find connections between problems that are novel and ones that are already familiar (Rogoff 1990). This process is akin to a scaffold, in that parents monitor tasks, provide hints at appropriate places, and model strategies and adaptive coping skills when a task is difficult. In other words, parents work to create a context in which the unfamiliar gradually becomes familiar. Parents probably do not have explicit instructional strategies in most cases for teaching their children how to master new skills. However, in keeping within the ZPD, parents learn (ideally), as a result of their interactions with their children, the best ways to offer just the right amount of challenge. Importantly, Rogoff has placed context and culture at the center of her investigations on cognitive socialization, a topic we explore more fully later.

Not surprisingly, research has revealed social class differences in parents' cognitive socialization practices. For example, middle-income mothers in Sigel's study were more likely than lower-income mothers to engage in higher levels of questioning in the problem solving tasks. In a related vein, Robert Hess's study of mothers' communication and interactions styles showed that middle-income mothers were more likely to foster an active and assertive approach to learning. In contrast, lower-income mothers were more likely to foster a passive and compliant approach (Hess and Shipman 1965). For example, when asked how they would prepare their children for the first day of school, middle-income mothers stressed that school was a place to learn and increase skills and knowledge. Lower-income mothers focused on the importance of proper behavior, such as listening to the teacher.

Motivational Socialization

Parents' motivational socialization strategies are also seen as implicit. The accumulated evidence suggests that parents' attitudes, values, and beliefs about learning and education guide their interactions with their children and have a causal influence on their children's developing achievement beliefs and behaviors (Bempechat 1998). In an extension and applica-

tion of Nicholls' research, Carole Ames found that performance-oriented and mastery-oriented mothers differed in how they defined success, preferred different kinds of feedback and tasks, and evaluated desirable student qualities differently (Ames and Archer 1987). Performance-oriented mothers preferred tasks that ensured success, were more likely to attribute success to ability, preferred feedback that indicated relative standing in the classroom (normative feedback), and viewed the ideal student as one who had high ability and succeeded with little effort.

In contrast, mastery-oriented mothers preferred tasks that would challenge their children, were more likely to attribute success to effort, and valued children who had low ability, but tried very hard. It is possible that mothers who emphasize performance over mastery may not be modeling for their children strategies for coping with difficulty and setbacks. We will return to the general theme of resiliency in a later section.

The influence of parents' beliefs about learning is particularly striking in research on mothers' differential perceptions of the causes of success and failure in mathematics in boys versus girls. Mothers tend to attribute the success of girls to high effort, and failure to low ability. In contrast, mothers tend to attribute the success of boys to high ability, and failure to lack of effort (S. D. Holloway and Hess 1985). The implicit message to girls is that failure in math is the result of an internal, stable quality over which they have no control, while boys are conveyed quite the opposite view.

Several researchers have documented social class differences that have challenged a widely held assumption that lower-income parents simply do not care about their children's education. Annette Lareau's work has been particularly influential in this area (Lareau 1987). In her ethnographic research, Lareau has showed that, contrary to teachers' beliefs, lower-income parents were as concerned about their children's education as middle-income parents. They differed, however, in their beliefs about their role versus the teacher's role in educating their children, and also had very different perceptions of self-efficacy in their ability to help their children. Middle-income parents viewed their children's education as very much a mutual concern between home and school, while lower-income parents believed that their children's education was more the responsi-

bility of teachers and the school. As a result, they read to their children, initiated interactions with teachers, and attended school events much less frequently than did middle-income parents. Lower-income parents also reported feeling reluctant to help their children, for fear that they might mislead them academically.

Lareau suggested that lower-income parents' inferior education and lower-prestige jobs led them to be more dependent on teachers to know what is best for their children. In particular, she argued that middle-class culture provides parents with more cultural capital. Given their own levels of education, they have access to more knowledge about schooling and more resources to turn to in the event that their children need help. This serves to further the interdependence between home and school contexts.

PARENT INVOLVEMENT

Parent involvement represents a complex set of beliefs and behaviors, all of which are beneficial to students' academic achievement and motivational resources. Parents who consistently stay abreast of school developments have higher-achieving children than those who maintain minimal contact. Similarly, involved parents tend to develop more positive attitudes towards the school and its teachers. They tend to see their children's teachers as genuinely interested in helping them support their achievement at home (Epstein 1987). Joyce Epstein's extensive research has examined ways in which the home-school connection can be strengthened to foster parent participation (Epstein 1987; Epstein and Van Hooris 2001). Epstein proposed a model of educational socialization that identified six aspects in the home environment that foster academic achievement. She describes these as **TARGET** structures, and they include **T**ask (the variety of activities in which children participate at home), **A**uthority (the extent to which children participate in family decisionmaking), **R**eward (the ways in which parents reward their children for intellectual progress), **G**rouping (how parents influence their children's interactions with family members and peers), **E**valuation (standards and expectations for performance), and **T**ime (how parents help their children manage their time).

Epstein has suggested that parent involvement can be fostered by communicating strategies that parents

can use to make their homes conducive to learning, staying in frequent contact about student progress, enlisting parents as volunteers in school activities and on governing councils, and providing teacher assistance with educational tasks at home. Epstein recently proposed an interactive approach to homework, in which students involve their families in their homework assignments. Her TIPS homework design (**T**eachers **I**nvolve **P**arents in **S**choolwork) depends on very carefully crafted and explained homework assignments. For example, the language arts homework assignments require students to engage in such activities as reading the writing prompts out loud, discussing the topic with members of their family, reading their assignment out loud, and taking notes on their family's reactions to their story. Across subject areas, participation in TIPS is associated with more parent involvement, greater completion of homework, and higher achievement (Van Hooris 2001).

Given the variety of ways in which parents can involve themselves in their children's schooling, researchers have found it helpful to integrate aspects of cognitive and motivational socialization in their investigations of predictors of parent involvement. Wendy Grolnick has proposed that parent involvement is best conceptualized as a multidimensional construct in which involvement occurs at three levels (Grolnick et al. 1997; Grolnick and Slowiaczek 1994). Overt behavior, or school involvement, describes such activities as attending parent-teacher conferences and other events at school. Personal involvement is characterized by demonstrations that parents enjoy their children's school, as well as their interactions with teachers and staff. Cognitive/Intellectual involvement includes providing help with homework and exposing children to intellectually stimulating resources and activities, such as trips to the museum.

Grolnick found that these different dimensions of parent involvement vary as a function of social class. Among the third through fifth grade students she studied, she found that more highly educated mothers were more likely to be involved at the intellectual/cognitive level. However, there were no social class differences in behavioral involvement, suggesting that lower income, less educated parents do indeed become involved in their children's schooling. Greater behavioral and intellectual/cognitive involve-

ment was associated with higher perceived competence and sense of control over learning outcomes. Grolnick suggests that parents who attend school events may be communicating its importance to their children, and may be also modeling ways to deal with questions or concerns. This is one way in which children may come to see school outcomes as within their control. Additionally, parents who make intellectually stimulating resources available may make their children more comfortable with cognitive, school-related tasks. This familiarity may also serve to foster the view that these kinds of activities are controllable.

In a later expansion of her model, Grolnick examined the dimensions of parent involvement from an ecological perspective in order to develop a model of factors that affect parent involvement. She focused specifically on parent involvement at the individual (e.g., parent self-efficacy, child temperament), contextual (family circumstances), and school (teacher practices) levels. At the individual level, she found that parent involvement was related especially to the intellectual/cognitive dimension. Parents who reported that their children were difficult were less likely to engage with them in intellectual tasks, most likely because they find it difficult to work with them.

School/behavioral involvement was found to be lower in lower income families whose context was difficult. In addition, difficult family context and lack of social support was associated with less personal involvement. Grolnick suggests that stressful family circumstances may make it difficult for parents to attend to the details of daily school life. Difficult family context also undermined school involvement in mothers of boys, but not girls. As Grolnick argues, it may be that, under stressful family circumstances, mothers of boys may perceive them as being less needy, and may focus their limited energies on their girls.

Interestingly, teacher practices that seek to involve parents appeared to have the greatest impact on parents who had the most resources. Parents with high self-efficacy regarding their parenting skills, who saw themselves as teachers, and whose family circumstances were less stressful, were the most likely to respond to teachers' efforts at involvement. In other words, teacher attempts at parent involvement may not reach the parents whose children would benefit the most from their attentions. These findings point

to the importance of accommodating the differential needs of different families, and of being flexible in the design of programs intended to foster parent involvement.

ETHNICITY AND THE SOCIALIZATION OF ACHIEVEMENT

Indicators of achievement show that, despite steady gains in academic achievement, the school performance and educational attainment of African American and Latino students continues to lag behind that of their Caucasian and Asian American peers. For example, the High School Transcript Study, conducted by the National Assessment of Educational Progress (NAEP), found that in the decade from 1990–2000, high school GPA rose for all students (NAEP 2003). However, ethnic gaps in achievement were evident, with Asian American and Caucasian students performing significantly better than their African American and Hispanic peers (NAEP 2000). Math and English assessments from the 2000 NAEP assessments show similar ethnic discrepancies. Nationally, African American and Latino students have a higher high school dropout rate (13.1 percent and 27.8 percent, respectively) relative to their Caucasian and Asian American peers (16.9 percent and 3.8 percent, respectively). Finally, among 18–24 year olds, 35.9 percent of Caucasian, 18 percent of African Americans, and 8.9 percent of Latinos have completed four years of college.

These achievement data are cause for great concern. As the demographics of our nation continue to evolve, educators find themselves having to meet the educational needs of an increasingly diverse student population. It has become progressively more urgent to understand factors underlying the achievement gap. Unfortunately, relative to the research that has been conducted on school failure, relatively little has focused on factors that promote success. For example, when efforts at compensatory education began in earnest in the 1960s, the prevailing attitude was that low-income parents were failing to provide their children with adequate stimulation and training, thus stunting their basic cognitive development. This "deficit model" focused not on children's motivation or their school learning, but on basic cognitive deficiencies that were presumed to result in school failure. The underlying assumption was that if low-

income parents could be encouraged to become more like white, middle-income parents, then the achievement gap would narrow.

The difficulty with this and other research that is focused on between-group, or inter-group differences, is that middle-class white children are considered the normative standard against which all children can be compared. It has become increasingly clear that this approach is methodologically flawed, and prominent researchers, such as Diana Slaughter-DeFoe and Margaret Beale-Spencer, are arguing that in order to advance knowledge and understanding, research must become more culturally sensitive (Slaughter Defoe et al. 1990; Spencer et al. 2001). One way to accomplish this is to conduct within-group, or intra-group, analyses of variation in achievement and motivation. Studying how high and low achieving students within one ethnic group differ in their achievement beliefs, for example, can provide insights to teachers that can help them in their daily work with students.

Some early inter-group research on cognitive socialization in African American families suggests that high achievers may have mothers who are more effective teachers. Diane Scott-Jones (1987) found that mothers of higher-achieving first grade students integrated learning into their daily routines, made more books available to their children, and held academic (learning) as opposed to behavioral (compliance) goals for their children. Norman-Jackson (1982) similarly found that children who later became good readers had parents who, at an early age, encouraged verbal interaction that was initiated by their children, provided more explanations, taught their children letter recognition, and played "school" with them.

With respect to motivational socialization, some retrospective studies of African American students have reported that high-achieving students recalled that their parents may not have helped them with homework, but provided a great deal of support for their education. For example, one study found that students recalled their parents as having believed in the work ethic, even in the face of blatant racism (Edwards 1976). In a well-known ethnographic investigation, Reginald Clark studied the family life of high- and low-achieving African American teenagers in a public housing development. He found that parents of high-achieving students, though not well educated themselves, were determined that they would

escape poverty through education. They made financial and personal sacrifices for their children's schooling, and believed that learning was the mutual responsibility of home and school. These parents felt strongly that children should be held responsible for their education by attending school regularly, paying attention in class, and actively participating in classroom discussions. They had clear expectations that homework and other assignments would be completed on time, maintained regular contact with the school, and set consistent limits on their children's behavior, both in and out of school. In short, they appeared to engage in what Baumrind called authoritative parenting.

In contrast, parents of low achievers were very permissive, had virtually no rules about household chores or schoolwork, and were unaware of day-to-day aspects of their children's school lives. These parents were interested in their children, but had a sense of powerlessness about their school achievement. They had little or no involvement in their children's school and did not take responsibility for their children's academic achievement. While parents of high achievers expected them to complete some sort of post-secondary schooling, parents of low achievers hoped that their girls would marry and their boys would find jobs.

Current research is placing culture at the center of investigations into parents' educational socialization strategies. Harkness and Super's notion of the "developmental niche" is particularly helpful in understanding how parents' behavior is shaped by the culture in which they live (Harkness and Super 1992). This theoretical construct examines how culture operates to define and regulate children's environments. According to Harkness and Super, the child's physical and social settings, the family's customs of child rearing and child care, and the psychology of caregivers operate in tandem as a system that mediates their children's individual experiences in their culture. Daily social and cultural activities are presumed to reflect parents' goals for their children, and parents' child rearing practices are representative of their cultural goals (Harkness and Super 1992).

For example, recall the influence that parents' beliefs about intelligence have on their children's developing beliefs. There is not one definition of intelligence, effort, or ability that can be said to apply across many ethnic or cultural groups. Views

about what constitutes intelligent behavior vary as a function of culture. Understanding this variation can help us understand the different goals that parents have for their children. In their investigations of parenting and school achievement in Latino families, Ronald Gallimore and Claude Goldenberg have found that the notion of *bien educado*, or being well brought up, has different meanings in U.S. and Latino contexts. For Latino parents, a child who is *bien educado* has high moral character and behaves appropriately in social situations. Innate ability, which is the salient aspect of intelligence in mainstream U.S. culture, has less importance for Latino parents (Reese et al. 1995). A child can do well in school, but not be considered *bien educado* if she is disrespectful and selfish.

Gallimore and Goldenberg addressed the issue of inter-and intra-group variability by proposing that cultural models be distinguished from cultural settings (Gallimore and Goldenberg 2001). In their framework, a cultural model is a mental schema, a shared understanding of how the world works. A cultural setting, in contrast, is an activity that two or more individuals come together to pursue. Culture exists and is co-created in collaborative activities that people value, such as a parent teaching her child how to cook. According to Gallimore and Goldenberg, cultural settings can vary within a cultural model. In their qualitative studies of Latino parents' cultural models of schooling, they documented that parents assigned little importance both to reading to their preschool children and their children's pre-literacy activities, such as pretending to read. Far from indicating a lack of interest or concern with their children's literacy development, these mothers adhered to a cultural model in which it makes more sense to begin reading to children when they are old enough to understand the material. Early "pretend" reading was thought of as playful behavior that did not necessarily have any value for later reading ability.

While this cultural model of literacy was shared among the Latino families, many factors influenced variation in cultural settings in which literacy developed. For example, one mother's involvement in her church community, parents with greater educational experiences in Mexico, and another mother's exposure to her employer's literacy activities with her own child were all variables that prompted literacy ac-

tivities at home that deviated from the cultural model.

Importantly, Gallimore and Goldenberg have used their research findings to inform literacy intervention strategies that have been successful with Latino families. In one study, conducted over the course of a school year, they gave kindergarten children either small books (*libros*) or worksheets designed to promote literacy at home. Both the researchers and teachers expected that the *libros* would stimulate co-reading and re-reading between parents and children, thus improving literacy skills. Surprisingly, while children who had been assigned *libros* had greater literacy skills at the end of the year than their peers who had been assigned worksheets, the use of worksheets and not *libros* was related to increased literacy skills. Rather than engage in co-reading, parents had used the *libros* in the same way that the other group had used the worksheets—as a platform from which new words could be practiced by rote and repetition. In other words, these parents adapted the *libros* to fit their cultural model of how literacy develops.

This research does not support the general stereotype that poor ethnic minority parents do not care and are uninvolved in their children's schooling. Instead, it highlights the extent to which it is critical to understand how parents' cultural models influence the learning goals they set for their children, as well as the ways in which they choose to foster these goals. This culturally sensitive approach to research on ethnic minority children and their families holds great promise for extending our understanding of how achievement motivation develops in diverse families, and how we can plan intervention to foster academic achievement in culturally appropriate ways.

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ETHNIC AND CULTURAL INFLUENCES IN ACHIEVEMENT MOTIVATION

Interest in ethnic and cultural influences in achievement motivation has burgeoned over the last twenty-five years. Efforts to adopt a more comprehensive approach to understanding the achievement gap in

the United States coincided with the emergence of data from cross-national studies of achievement, all of which showed that American students lagged behind their peers in Asia and much of Western Europe in math and science skills. These achievement differences prompted researchers to pay closer attention to cultural models of learning.

In the United States, the adaptation of ethnic minority children to the culture of schooling received a great deal of attention when John Ogbu, a cultural anthropologist, suggested that many African American students perceive that to succeed in school is to implicitly betray their ethnicity (Fordham and Ogbu 1986; Ogbu 2003). Because schools exemplify white, middle-class culture, issues of ethnic identity loom large for some students. According to Ogbu, the major reason that African American students underperform in school is because they experience “inordinate ambivalence and affective dissonance” about school success. As “caste-like” minorities, who were forced by slavery or conquest into this country, institutionalized racism and discrimination have had a pervasive and insidiously negative influence on the development of achievement beliefs and behaviors. Because whites historically refused to acknowledge African Americans’ intellectual ability, the latter began to doubt their abilities and came to view achievement as the province of whites only. An antiachievement ethic emerged, in which students began to discourage peers from academic success, equating this behavior with “acting white.”

Fordham and Ogbu argued that African American students have developed an “oppositional frame of reference” that includes strategies for protecting their ethnic identity. In interviews with African American students in a predominantly black high school, they found that underachievers knowingly undermined their own achievement by not studying and cutting classes. High-achieving students were committed to doing well, but reported that they had developed strategies for coping with academic success that included acting out, taking on the role of class clown, keeping their efforts a secret, and generally maintaining a low profile. They were very concerned about being labeled the derogatory “brainiacs” and being accused of “acting white.” Similar findings have been reported among Latino youth as well (Matute-Bianchi 1986) and, recently, among affluent African American students (Ogbu 2003).

It has been suggested that the “acting white” phenomenon is problematic, largely because it assumes that white, middle-class culture is the normative reference point for African American students. In a challenge to Ogbu’s theory, Margaret Beale Spencer and her colleagues have found that high achievement among African American high school students is associated with high Afrocentricity and high self-esteem (Spencer et al. 2001). Doing well in school for these students was not associated with identification with white culture. These findings underscore the importance of a culturally sensitive approach to research on ethnic minority groups.

In this context, Claude Steele’s construct of “stereotype threat” is particularly useful in understanding the dynamics underlying the achievement gap (Steele and Aronson 1995). Steele has argued that the negative stereotype of African Americans’ intellectual ability interferes in a substantive way with student achievement. In situations where ability is at issue, African American students fear confirming their racial group’s stereotype and therefore “disidentify” with the school and its values through lack of effort or other self-defensive attempts to maintain their self-esteem.

Increasingly, researchers are agreeing that any investigation into factors that influence academic achievement should be conducted from an ecologically valid perspective. It is widely accepted that the multiple contexts in which children live and grow need to be considered in order to develop a comprehensive understanding of school achievement and academic motivation. Lynn Okagaki’s Triarchic Model of School Achievement is one example of a holistic approach to research on ethnicity and achievement (Okagaki 2001). She has proposed that there are three major factors that influence school achievement. The perceived form and function of school can foster resistance to schooling in a number of ways. For example, children whose culture stresses cooperation, interdependence, and places the needs of the group above those of the individual may experience a discontinuity between their home values and those of the school. Public schooling in the United States is a largely individual and competitive enterprise, and children who feel uncomfortable speaking out in class or making eye contact with teachers and peers may be at a severe disadvantage. Their relatively humble behavior may be misconstrued as academic disengagement, as has been the case with Native American children.

Further, research has shown that ethnic minority children and their parents perceive the function of schooling in a qualitatively different way from other groups (Steinberg 1996; Steinberg, Dornbusch, and Brown 1992). Lawrence Steinberg's survey research has demonstrated that, while African American, Latino, Asian American, and white students agree that a good education is likely to improve one's chances of having a good job, only African American and Latino students believe that one can obtain a good job without a good education. As he and others have argued, students need to see the vital connection between education and a secure future. They need to perceive the benefits that a good education offers, but this may be difficult for those students who perceive a discontinuity between home and school values, and who are simultaneously witness to barriers to opportunity in the workplace. Okagaki and others have suggested this has not been an issue for many students of Asian descent, largely because of cultural models that place a high value on learnedness. Parents tend to view their role as that of facilitating and ensuring educational attainment, and children are aware that high achievement is important to maintaining family honor.

In addition, Okagaki argues that the role of the family is a critical factor in her model of achievement influences. She highlights aspect of cognitive and motivational socialization discussed earlier—high expectations, the belief that effort can enhance one's intelligence, direct and indirect help and encouragement, and a belief that they can indeed foster their children's school achievement. Finally, the role of the child or, more specifically, a resilient academic identity, is seen as the third component of the triarchic model. As we have seen, school achievement is tied to ethnic identity, and if school success is seen as a subtractive process (one that diminishes one's ethnic identity), it will become problematic for some students to achieve their potential.

Taken together, these different lines of theory and research converge to suggest that schools may be more successful in narrowing the achievement gap through culturally sensitive parent education and student intervention programs. These need to place cultural models of learning at the center and to focus on capitalizing on the many strengths and values that families imbue in their children.

The need to learn from other cultures took on a

decidedly different form of importance during the wave of cross-national research on achievement outcomes during the 1980s. A number of investigations demonstrated the alarming extent to which American students were underperforming in mathematics, especially relative to their Japanese and Taiwanese peers (Beaton et al. 1996; H. W. Stevenson, Lee, and Stigler 1986). In an early study of Japanese, Chinese, and American students, the math achievement of Japanese first graders was shown to be on par with that of their American fifth grade peers. In a ten-year follow-up study, the achievement gap was still evident, and had widened. Larger, more exhaustive investigations showed that in a variety of mathematics subject areas, such as fractions, algebra, geometry, measurement, and probability, American elementary and secondary students lagged behind their peers in many other nations. For example, the Third International Mathematics and Science Study (TIMSS) examined math achievement in forty nations (Beaton et al. 1996). American eighth graders scored significantly lower in average achievement relative to students in half of the nations surveyed, including France, Austria, Japan, and Singapore.

In a series of investigations, Harold Stevenson and his colleagues argued that these achievement differences were the direct result of cultural differences in perceptions of effort and ability. For example, he found that, when asked to rank the importance of effort, ability, luck, teacher quality, and task difficulty, American mothers and children were more likely than Japanese and Chinese mothers and children to implicate lack of ability in explaining school failure. In contrast, Japanese and Taiwanese mothers were more likely to attribute failure to lack of effort (H. Stevenson and Lee 1990). According to Stevenson and his colleagues, American students' underachievement is the result of their (and our culture's) adherence to an "ability" model of achievement. In contrast, Japanese students do well because they (and their culture) embrace an "effort model" of achievement.

These findings were very compelling on their face, and prompted many educators to argue that if American schoolchildren (and their parents) could be convinced of the greater importance of effort over ability, we would begin to see test scores rise. As is the case with much social science, the simplest solution belies the complexity of the factors underlying inter-

national achievement differences. Data from the existing cross-national studies are correlational, which means that we do not know the extent to which Japanese students' effort attributions predict their high performance, or vice versa. Therefore, we cannot reasonably conclude that Japanese children's greater orientation to effort is the cause of their higher achievement. This is especially true in light of the fact that past research has consistently found a strong and positive relationship between ability attributions and academic achievement. Furthermore, large-scale studies do not reveal differences in how students in different cultures interpret such achievement-related concepts as effort and ability.

In arguments echoing the trend in ethnic minority research, cultural psychologists argued that it is inappropriate to assume that traditional theories of psychology, developed within a Western framework, can be universally applied to all cultures (Roopnarine and Carter 1992; Rothbaum et al. 2000; Sinha and Sinha 1997). As Bronfenbrenner stated, a context-free, culture-free environment does not exist (Bronfenbrenner 1979). In essence, meaning making is shared and negotiated within a culture, and how we come to understand aspects of the self, such as ability, has implications for how we come to interpret achievement situations (Markus and Kitayama 1991). The implicit or "folk theories" of learning that all of us possess are embedded in cultural interpretations of how we think about being educated or learned (Bruner 1990). Clearly, then, it is critical to understand that culture guides parental socialization practices, including those having to do with education (Roopnarine and Carter 1992; Serpell and Hatano 1997).

This means, for example, that we cannot properly compare the attributional beliefs of mothers and children without understanding the differential meaning that they bring to bare on these and other educational concepts. In fact, Holloway demonstrated that, in Japan, effort is socially constructed. Individuals speak about effort as a way to fulfill obligations to themselves, their families, and their communities. In the American context, effort is more individually oriented, and means trying hard (Holloway 1988).

At the same time, researchers run the risk of assuming that all members of a given culture adhere to their culture's "cultural model" of development. In

this regard, Japanese and American cultures characterize the comparisons that have been made between "Eastern" and "Western" societies. Broadly speaking, Japanese culture has been characterized as oriented around values of interdependence, while American culture is said to foster independence. Where the Japanese are described as willing to sacrifice individual goals to meet the needs of the groups, Americans are said to work to fulfill individualistic and personal goals (Greenfield 1994; Mouer and Sugimoto 1986).

Cultural assumptions can lead to conclusions that may be too general. For example, James Stigler described the relatively common practice in Japan and Taiwan of asking students to show the class at the blackboard how they are solving math problems that they are getting wrong. This public display of difficulty is contrasted with the more private and individual way that American teachers deal with students having difficulties. Stigler points to cultural differences in beliefs about ability to explain these pedagogical practices (Stigler and Perry 1990). Since Japanese teachers adhere to an "effort model" of achievement, it could be assumed that mistakes are regarded as helpful tools, which in conjunction with hard work, can be used to master any difficulties in understanding. Since American teachers adhere to an "effort model" of achievement, one could similarly assume that having to try hard in front of peers would likely implicate low ability, and perhaps diminish the student's self esteem.

Of course, there may be many Japanese students who are embarrassed by their teachers' practice of sending them to the board. And, there may be many American students who would welcome working a problem out with the help of their peers. The overall message is that, while cultural models of development are helpful, they represent an initial line of inquiry, one that is focused on general group differences. These differences should then be examined through increasingly targeted and nuanced methods, including in-depth interviews and ethnographic studies. This is one way in which researchers can ensure that findings emanating from one setting are not inappropriately applied to members of other settings (Harkness and Super 1992).

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SCHOOL INFLUENCES IN ACHIEVEMENT MOTIVATION

The structure of schooling and the nature of teaching have a profound influence on children's achievement and their developing learning beliefs and behaviors. Many schools engage in ability grouping and tracking, in which students perceived as lower in ability than their peers are separated from their cohorts. In addition, teachers are at times unaware that their feedback practices can communicate low expectations and a belief that a student lacks the ability to be successful in school. Interestingly, the negative effects of these school and teacher factors are attenuated in Catholic schools across the United States. In this section, we will examine research on school structure and teacher expectations, and consider the ways in which Catholic schools, as an exemplar of school choice, foster high achievement in students ordinarily expected to fail.

TRACKING AND ABILITY GROUPING

The notion underlying the tracking at the high school level is that students learn better when they are grouped with peers of similar ability. Educators have worried that bright students may be held back by slower students who, in turn, need to have their self-esteem protected from exposure to higher ability peers in heterogeneous classrooms. Further, it has been suggested that the learning problems of slower students can be better addressed in like-peer groups. In its ideal manifestation, tracking and ability grouping should represent different pathways to the same academic outcome. (At the elementary-school level, the term *ability grouping* is used to denote instances where students are grouped by ability level, usually for reading.) In other words, all students should be exposed to the same material, albeit at different rates.

Much of the research on the determinants and effects of tracking has been conducted by educational sociologists. They typically make use of large data bases, such as the High School and Beyond (HSB) study. The primary advantage of such data sets is that the data are longitudinal and the participant pool sufficiently large (several thousands of students) and nationally representative to allow for sophisticated

data analysis. In most analyses, the roles of background variables, such as socioeconomic (SES) status, parent education and occupation, gender, number of siblings, educational expectations, goal orientation, and academic self-concept are taken into account. Predictor variables often include outcomes such as GPA, class rank, and plans to attend college.

Researchers who have studied the determinants of tracking have found consistently that lower income students and students of color are overwhelmingly placed in lower tracks, in numbers disproportionate to their representation in the population. For example, one large scale, nationally representative survey found that social class had an influence on track placement independent of its influence on academic achievement. Results showed that students in the top SES quartile had a 53 percent chance of being placed in an academic track, while those in the bottom quartile had a 19 percent chance of being similarly placed. At the other end of the spectrum, students in the top SES quartile had a 10 percent chance of being placed in the bottom track, while those in the bottom SES quartile had a 30 percent chance of being similarly placed (Vanfossen, Jones, and Spade 1982).

Tracking affects academic outcomes and experiences in substantive ways. For example, Adam Gamoran (1987) found that placement in an academic track results in high math and verbal SAT scores, higher high school GPAs, and high scores on achievement tests. He argued that that these higher outcomes are the result of exposure to a more demanding curriculum, while other researchers have suggested that these secondary school outcomes are more the result of academic trajectories that are set in motion much earlier (Alexander and Cook 1982.)

In her ethnographic studies of high-school students, Jeannie Oakes has documented the negative effects of tracking on student achievement and motivation (Oakes 1990). She found that high-tracked students are challenged to acquire complex cognitive competencies. For example, when she asked students to describe their English classes, high-tracked students reported that they wrote and read more than their low-tracked peers, and engaged in tasks that fostered higher order thinking, problem solving, and evaluative skills. In contrast, low-tracked students reported involvement in rote learning activities that fostered simple memory and reading comprehension.

Higher-tracked students believed that their teachers held high expectations for them and expected them to acquire higher order skills. In contrast, lower-tracked students perceived that their teachers expected them to acquire “life skills,” such as being able to open a bank account, and demanded conformity in the classroom.

Further, low-tracked students reported being in classrooms marked by much disruption and perceived their teachers as unmotivated, unenthusiastic, and punitive. High-tracked students reported learning from supportive teachers who were engaged in their subject area. Relative to lower-tracked classes, students in higher-tracked classes are more likely to come into contact with peers who are highly motivated and have college aspirations. Given this differential pattern of experiences, it is not surprising that lower-tracked students report lower self-esteem, lower aspirations, and feelings of alienation.

Researchers and educators concerned about the negative effects of tracking have suggested ways in which to attenuate its influence. The most obvious is to avoid tracking altogether, under the assumption that it helps a few students at the educational expense of many. “Untracking” can be made to work if teachers receive professional development training in teaching heterogeneous classrooms, students are provided with extra help when they need it, and classrooms are oriented around cooperative learning. Alternatively, some researchers have suggested tracking be postponed until as late as possible, and that schools develop better placement criteria. Specifically, a portfolio of learning that includes multiple assessment measures is said to be preferable to a single criterion, such as end-of-year grades.

TEACHER EXPECTANCIES

In a study that received a great deal of attention, Robert Rosenthal examined interpersonal expectancy effects—the effect of one person’s expectations for the behavior of another person on that person’s behavior—in a school setting. In what came to be known as the “Pygmalion Study,” Rosenthal administered to all students in one elementary school in California a test that was described as an assessment to identify students who would “bloom” academically the following year (the Harvard Test of Inflected Acquisition) (Rosenthal and Jacobson 1968). This test

was actually a standard intelligence test. He randomly picked about two students in each classroom as “bloomers” and identified them as such to their teachers. He provided no advice or intervention strategies for teachers to use. Rather, he simply waited until the end of the next school year, and re-tested the children. His results were quite surprising.

At all grade levels, children from whom teachers expected intellectual gains showed a significant increase in their intelligence test scores. Teachers described these children in very positive ways, as happier, more curious, more interesting, well adjusted, and more appealing and affectionate, relative to the “non-bloomers.” In addition, the teachers believed that the bloomers had a significantly greater chance of becoming successful in the future. It appeared, therefore, that the teachers had managed to convey their high expectations in ways that resulted in achievement gains. How might this have happened?

Rosenthal proposed a four-factor theory of the communication of expectancy effects. He argued that teachers create a warmer social and emotional climate for their special students; that they provide them with verbal and nonverbal feedback that is more differentiated; that they teach their special students more material of a challenging nature (input); and that they give them greater opportunities to respond, both verbally and nonverbally (output).

According to Rosenthal, the direct effect of teachers’ negative expectations is that, over time, they deny their students opportunities to learn. Indirectly, teachers may communicate low expectations by not waiting long enough for students to respond to a question, or not scaffolding their responses. They may criticize them more often for failure and praise them less often for success. Or, they may praise their students for intellectually inappropriate aspects of a task, conveying no information that is helpful for learning. They may choose to seat these students at the back of the class, and generally pay less attention to them.

The controversy surrounding what the Pygmalion Effect spawned an enormous literature on teacher expectancy effects. Jere Brophy and Thomas Good, in reviewing the literature, found that across a variety of studies with students at different ages and employing different methods, the research has come to show that teacher expectations can and sometimes do have self-fulfilling prophecy effects on student

achievement (Brophy and Good 1974). However, these effects, as measured by some studies, are relatively small in the classrooms of most teachers, largely because most teachers hold accurate perceptions of their students' abilities. And, most teachers correct their assumptions when confronted with information that disproves a given expectation. The effects are larger, however, in cases where teachers' perceptions are both inaccurate and rigidly held. The deleterious effects of teacher expectations are most apparent in such cases. According to Brophy and Good, the probability of self-fulfilling prophecy effects depends more on the rigidity with which expectations are held than with their accuracy.

CATHOLIC SCHOOL ACHIEVEMENT

Catholic schools have provided a fertile environment for the study of achievement in low-income students of color. Since the 1980s, a great deal of evidence has converged to show that, across a variety of pre- and post-secondary measures of achievement, including GPA, SAT scores, high school completion, and college attendance, low-income students of color attending Catholic schools attain outcomes that are significantly higher than those of their peers in public and private, non-sectarian schools. These findings challenge the view that factors that are ordinarily expected to place students at risk for school failure necessarily predict negative academic outcomes.

In his early research using the High School and Beyond (HSB) data set, James Coleman demonstrated that, relative to high SES students, low SES students achieved greater gains in math and reading in Catholic than in public or private, non-sectarian schools (Coleman, Hoffer, and Kilgore 1982). This comparison held as well for ethnic minority groups, where African American and Latino students in Catholic schools outperformed their peers in other types of schools. In addition, Coleman found that dropout rates in each SES quartile were lower in Catholic than in other types of schools, and that African American and Latino students dropped out at significantly lower rates than their peers in the other school types.

Valerie Lee and Anthony Bryk (Bryk, Lee, and Holland 1993) examined the structure of Catholic as compared to other types of schools. Their study of tracking found significantly more students in aca-

ademic tracks in Catholic than public schools (43 percent vs. 23 percent). Further, relative to public schools, student background characteristics, such as race and single parenting, were less related to track placement in Catholic schools. The relationship between educational aspirations and track placement was also stronger in Catholic than public schools. That is, 71 percent of Catholic school eighth graders had plans to attend college; 72 percent were in the academic track by the tenth grade. The parallel correspondence for public school students was 53 percent with college plans in eighth grade against 38 percent enrolled in the academic track by the tenth grade.

Interestingly, the college aspirations of Catholic school students are less likely to deteriorate over the high school years than those of public school students. In addition, Catholic school students who transferred to public schools were less likely to remain in the academic track than if they had stayed in the Catholic school system. Most compelling are the findings having to do with differences in curricula. In Catholic schools, students in the general track took an additional year of math and six months more of foreign language instruction than did general students in public schools. Catholic school students in the vocational track took one year more of math than public school students in the vocational track.

Research on the achievement beliefs of Catholic and public elementary school students has suggested that there may be a motivational as well as academic benefit to Catholic school enrollment. In a survey study of a diverse group of low-income fifth and sixth graders, Janine Bempechat found that African American Catholic school students, relative to their public school peers, endorsed attributions for success and failure that are more conducive to achievement (Bempechat, Drago-Severson, and Boulay 2002). Latino and African American Catholic school students were less likely to attribute success in mathematics to external factors, Latino Catholic school students were more likely to attribute success to ability, and African American Catholic school students were less likely to attribute failure to external factors. These findings suggest that Catholic schools may be fostering a sense of self-efficacy and personal responsibility, both of which, as we have seen earlier in this chapter, are strongly associated with school success.

How do Catholic schools, which typically oper-

ate on a budget that is less than one-third that of public schools, achieve these outcomes? The accumulated evidence suggests that a teaching philosophy that stresses the belief that all children can learn, an organizational structure that fosters teacher accountability through a clearly articulated mission (preparing children for post-secondary schooling), and a central curriculum in which few distinctions are made between students all operate to encourage high achievement (Gamoran 1987; Hill, Foster, and Gendler 1990; Keith and Page 1985).

Notwithstanding these positive findings, the apparent benefits of Catholic schooling are not without controversy. The main issue is that of self-selection. There is always the possibility that low-income parents and parents of color who choose to send their children to Catholic schools may differ in fundamental ways from parents who do not make this choice. They may be wealthier, more highly educated, and more involved in their children's schooling, with the possible result that their children may be more motivated (Goldberger and Cain 1982; McPartland and McDill 1982; Salganik and Karweit 1982). This concern has captured the attention of educational economists interested in the broader issues surrounding school reform, of which school choice is a major issue. Recent research using the HSB database suggests that self-selection may not be as much of a concern as has been suggested. Sophisticated statistical modeling techniques have provided evidence for negative selection. In other words, urban Catholic schools are more likely to select below-average, not above-average, ability students (Sander 1996).

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FUTURE DIRECTIONS IN ACHIEVEMENT MOTIVATION RESEARCH

Two primary challenges face researchers who study achievement motivation today. The first is that of integrating ethnicity and culture in theory and research. Much of the available research on children's achievement beliefs and behaviors remains limited

to samples of students who are largely white, suburban, and middle class. In a society that is increasingly diverse, findings that emanate from research on "majority" children are less likely to be applicable in urban classrooms serving the educational needs of low-income students of color. Research programs that focus on academic success in low-income students of color will provide us with insights that can help teachers in their work.

Further, with increasing globalization has come a need to better understand how culture influences child rearing and educational socialization. While we have much to learn from the success of other nations, our tendency to engage in national hand wringing over American underachievement needs to give way to educational reform efforts that will strengthen our schools, support our teachers, and demand the best from our students.

The second challenge is one of methodology. Researchers need to make more use of qualitative methods of inquiry that can deepen our understanding of findings that emanate from surveys and experimental studies. This will allow us to better help teachers, who work hard every day to foster a love of learning in their students. More specifically, a focus on meaning making allows us to uncover the variability in how students make meaning of their educational experiences. While it is helpful to know that some children think of ability as limited and others view it as malleable, how do children articulate their views on this? When given the opportunity to speak about their beliefs, we found that "entity" students (identified through a questionnaire) all spoke about their abilities in very incremental ways, and articulated strategies that they fall back on when they experience difficulty in school (Quihuis et al. 2002). This does not invalidate questionnaire studies as much as it provides nuance and depth to our understanding of the relationship between achievement beliefs and behaviors.

As demonstrated by the recent and ongoing research programs described in this chapter, such as that of Gallimore and Goldenberg (2001), the field is indeed beginning to embrace mixed methods of inquiry. These research efforts will allow us, ultimately, to provide children with learning environments that will foster motivation and a lifelong love of learning.

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III

LEVELS IN EDUCATIONAL PRACTICE

EARLY CHILDHOOD EDUCATION

In the field of early childhood, both competent care and effective education have long been regarded as essential to the intellectual, social/emotional, and physical development of infants and young children. When babies and young children feel the comfort that comes from depending on and trusting their adult caretakers, they are prepared to engage in effective cognitive and social learning. Conversely, the stimulation that comes from interesting learning materials and social interactions is only truly successful if emotional needs are first met. Thus, care and education in early childhood are intertwined when childcare centers contain some sort of educational program, and educational facilities include a focus on nurturing children's safety and comfort. In this discussion of early education, it is assumed throughout that care is an essential component.

The wisdom of this intertwining of early education and care has been validated, in recent years, by major advances in brain research. The importance of nurturing care is shown by the finding that stress and fear affect the brain's normal circuits and inhibit competent learning. The importance of intellectual stimulation is demonstrated by the finding that learning most easily takes place and has the longest lasting impact if engaged in during the early years. It is then that the brain's neurons are most ready to become more specialized and myelin sheaths begin to wrap themselves around the brain's axons, permitting information to move much more rapidly and easily. These periods of learning opportunity have been observed for many years and have been called "windows of opportunity," "sensitive periods," or "critical periods." Now, brain research has begun to show the physiological reasons such periods exist.

INFLUENTIAL PHILOSOPHERS AND EDUCATORS

Long before today's brain research demonstrated ways in which intellect develops in infants and young children, there were philosophers and educators who observed and intuited the unfolding that is now being proved. In the seventeenth century, John Comenius (1592–1670) (Jan Komensky in the original Czech) wrote about the necessity of concrete experiences for younger children and the importance of delaying abstract studies until later. For example, he argued that the study of history should begin with the here and now and the study of science with neighborhood nature (Comenius 1896).

Although Comenius has been largely forgotten today, two of his European contemporaries have not been, perhaps because they also influenced the world of politics. The Englishman John Locke (1632–1704) wrote that infants arrive in the world as blank slates or empty cabinets, ready to understand their worlds through the education they then receive from the adults around them. Like Comenius, Locke believed that younger children should learn by acting on concrete materials. He also argued for careful education of not just the intellect, but also of the social and physical aspects of a child (Locke 1964).

Jean-Jacques Rousseau (1712–1778), born in Switzerland a generation after Locke and Comenius, created his influential writings only after moving to France in his early adulthood. Rejecting the blank slate concept, Rousseau argued that infants are born naturally good. Like acorns that grow into healthy oaks given enough water and sunlight, children are preprogrammed for adulthood and simply need an education that will nurture their growth. Thus, the best education involves keeping children away from the evil influences of society as long as possible. It should be a "natural" education that keeps children

outdoors and doesn't push academics at an early age (see Compayre 1907).

Although both Locke and Rousseau promoted the idea of concrete learning materials, Locke conceived of them as having right and wrong answers (e.g., dice for learning math facts) while Rousseau preferred open-ended materials (e.g., sticks gathered outdoors to be used in many different ways). The two also shared a focus on males of the upper classes. Locke wrote about the education necessary to create "gentlemen," in part because he originally created his ideas for the young son of an upper-class cousin. In addition, although he talked of blank slates and empty cabinets, it was apparent to him that all slates and cabinets were not created of equal quality or expense. It was important that education should be appropriate to the life a child led, and could be expected to lead. Rousseau believed it more natural that children should be educated to take their expected place in their own class. For both men then, it was not necessary to provide literacy education to the lower classes who didn't need it. Further, the emphasis of academic education should be on males. Rousseau was especially effusive in his writings about the education of young girls who should be trained to make life as pleasant as possible for the young men they would marry.

The influence these two early thinkers have traditionally had on early childhood education and care is surprisingly extensive. It was they, apparently, who gave birth to the conflict between nature and nurture in the longstanding debates about the ways in which young children best and most naturally develop. Locke's view of the infant as a blank slate, as well as his contention that the character of fully grown men was more determined by their education than by the abilities they had been born with, led to the philosophy that nurture was the critical influence on successful development. Conversely, Rousseau's vision of the child as a naturally unfolding plant, born naturally good and ready to remain so, led to the philosophy that nature is more important.

A second influence has been on methods of, and goals for, teaching. Locke, with his more intrusive approach, focused on the products of learning experiences, such as learning math facts through playing with dice, as noted above. Rousseau, with his more hands-off approach to teaching, was more interested in process, so that the experience of gathering sticks

that might (or might not) lead to math discoveries, could itself provide all the learning the child needed. Even today, philosophers, theorists, and educators are often attracted to one or the other of these views.

It was in the nineteenth century that the kindergarten was invented by Friedrich Froebel (1782–1852), a German who read Rousseau and agreed that an education natural to young children, and one that took into account the wonders of nature itself, was the appropriate one. His approach was more structured than the one Rousseau suggested, and he was more protective of young children as they interacted with nature. Froebel created the kindergarten for children between the ages of three and five, and he viewed it as a safe, happy stepping stone between the haven of home and the larger world of the school. For infants as well as young children, Froebel created toys (called gifts and occupations) that contained more of the structure proposed by Locke than the open-ended approach preferred by Rousseau. Teachers were trained to present and direct the use of these materials in very precise fashion and the children were gently encouraged to follow instructions. One material, for example, was a small box of blocks in assorted rectangular shapes. Children did not play with these in a freeform way, but created varying designs with the help of teacher instructions and grid patterns cut into their tabletops. To Froebel, such activities constituted play, although they would not meet today's definition of play as something more freely chosen and directed by the child.

The twentieth century provided new views of the child that have given rise to the most modern methods of teaching. John Dewey (1859–1952) was one of those directly responsible for the demise of Froebel-style kindergartens. Primarily a philosopher with interests in education, Dewey was especially devoted to making learning real, authentic, and immediate for children. At the University of Chicago he was instrumental in creating a laboratory school that included, not a kindergarten, but a "subprimary" class. Viewing Froebel's ideas as rigid and outdated, but needing to somehow align himself with them to avoid alienating kindergarten teachers, Dewey chose to reinterpret those ideas. For example, he readily agreed with Froebel that children needed to play and that blocks provided an effective material for that purpose. Froebel blocks were actually included in the laboratory school, but there were no tables with

grids or predetermined constructions to be made with them. Instead, the blocks were played with freely and creatively.

Every class in the laboratory school was considered a small, democratic society and the children worked and played together to help create it successfully. In the subprimary class, the children studied their homes and families, then moved outward to learn about the local community. In warm weather, nature studies and walks in the neighborhood expanded their learning, but the focus was still on the here and now (Dewey 1990).

Dewey's ideas about education and democracy began to spread nationally, but over time they were watered down so that children became engaged in plenty of activities but not much learning. When, in the 1950s, the Russians demonstrated their scientific knowledge by arriving first in space, Dewey's ideas were blamed and removed, temporarily at least, from American educational favor. Examples of the long-term influence of Dewey's thinking on early education can still be seen in two New York City schools started by two young, idealistic teachers just prior to World War I. The first began as the Bureau of Educational Experiments with a small nursery school created as a laboratory for newly emerging ideas on early education. This later became the Bank Street School, which still exists as a demonstration school at the Bank Street College of Education. Lucy Sprague Mitchell, who had been the first dean of women at the University of California at Berkeley, was its founder. Caroline Pratt, equally interested in moving education in new directions, founded the City and Country School close by for somewhat older children. It too still functions along lines inspired by Dewey. It was the hope of both women that providing open-ended, child-centered education coupled with democratic views would make for a more democratic and cooperative world (see Seefeldt 1997).

Other influences on early education in the twentieth century came from two men, both born in the late nineteenth century, one in Switzerland (Jean Piaget) the other in Russia (Lev Vygotsky). They were in agreement that the infant's biological heritage was important, but so was the environment, and the way in which the two interacted was essential for development. To this interaction they each added another element, different from each other's, but complementary.

Jean Piaget (1896–1980), based on studying the results of intelligence tests taken by children and on close observation of young children themselves, concluded that humans essentially construct their own knowledge. Because he believed this happens as a result of the interaction between the biology children are born with and the environment provided them, his theory has often been called interactionism (see Piaget 1972). In most recent years, more emphasis has been put on the self-construction that takes place because of the interaction, and the theory is most often referred to as constructivism. Piaget's studies were principally in biology and psychology, but he eventually applied his ideas and findings to the field of education. In this, he concluded that the most effective learning takes place when children are minimally and skillfully guided rather than directly taught. Infants and young children can be provided with toys and other materials that are appropriate to their stage of development. As the children interact with these, adults might present more complex materials or ask questions that lead to further exploration and learning. Thus, as children continue to "operate" on the materials in their environment, and give continually deeper and wider thought to what they are doing, they construct their own knowledge.

Piaget's theory might be said to be socially constructed to the extent that it was, in part, a reflection of the democratic, individualistic Swiss society in which he lived. On the other hand, Lev Vygotsky (1896–1934) developed a theory of constructivism more suited to the emerging Marxist state in which he lived. He too observed the interaction between biology and environment in young children's development, but argued that optimal growth comes not so much from children's individual efforts as from social interactions with their "collective." As children are exposed to ideas just a bit more sophisticated or adequate than their own, they add to their knowledge. This step forward in cognitive understanding was called by Vygotsky the Zone of Proximal Development, and it would be the teacher's responsibility to understand each child well enough to provide learning within that zone (see Vygotsky 1962).

A comparison of Piaget's and Vygotsky's ideas is important to the understanding of early childhood education in much of the world today. They themselves never communicated although born in the same

year and inspired by many of the same motives and interests.

One of Piaget's major contributions to the understanding of child development was his complex theory of cognitive development. In addition, he posited a general theory of social/moral development that has since been expanded on by other researchers. These complementary theories describe children from birth when they have yet to see themselves as separate from their mothers, on through the egocentrism of the preschool years and into an increasing understanding of the world, and their place in it, during elementary and secondary school. Although Piaget did not speak of a zone of proximal development, he did aver that if children were exposed to thinking at a slightly more advanced level they would respond to it and increase their cognitive or moral understanding. Likewise, if the thinking presented to them was too far advanced, the children would not respond at all. This was Vygotsky's point as well.

How to get children to the next stage or zone, however, was a question that was answered differently by each theorist. Piaget's preference, which points to his individualistic thinking, was to let children explore on their own, with occasional input from the more knowledgeable teacher. Vygotsky, however, believed that the teacher should lead children into their explorations. This concept, later called scaffolding by followers of Vygotsky's ideas, has emerged, in early childhood education, as a popular counterbalance to the Piagetian approach.

A final point of comparison should be made in regard to the young child's development of language and its relation to cognition. Piaget's view was that intellect could develop without the use of language; therefore language development follows from intellectual development. Vygotsky held an opposing view that the use of language could actually help in the development of intellect. Again, these different approaches reflect the thinking that comes from an individualistic theorist versus that of a social theorist.

Both men observed that little children talk to themselves, but their interpretations of this behavior were quite different. To Piaget, such private speech was a clear demonstration of the egocentrism of the early years. Once children learned to consider the thoughts and preferences of others, they would stop talking so much to themselves. To Vygotsky, talking to themselves helped children organize their thoughts and

even regulated their behavior, a habit that would continue even after they became silent. Thus, private speech was not related to communication with others but with the self.

It is true, of course, that there have been many philosophers, theorists, psychologists, and educators who have influenced early childhood education other than those described above. Recent and ongoing brain research may lead the field in entirely new directions. Yet, the nature-versus-nurture debates and the individual-versus-social constructivism theories, along with the attempts to reconcile them all while still placing importance on education for democracy, underlie most current practices in the field. Thus, the following descriptions of today's early education will, at times, refer back to this introduction to history and theory.

This chapter contains five entries. It begins with a description of young children as they are understood today and from perspectives based on the influential historical figures described in the introduction. As the understanding of young children grows, it becomes increasingly necessary to provide them with advocates, and there are several organizations dedicated to this task. They are described in the second entry. This leads to current views about the essential elements of a learning environment for young children, including the characteristics necessary in their teachers. Different views of what curriculum and assessment should be made up the fourth entry and, in the final entry, some current and well-known educational models are described. Although each of these models is theoretically based on what research has told us about how young children learn best, they are sometimes significantly different from each other.

Suzanne L. Krogh

UNDERSTANDING THE YOUNGEST STUDENTS

The current position of most people in the field is that development in infants and young children should be regarded, not as normal or abnormal, but as typical or atypical, and that this does not lead to two separate groups of children. Instead, there is

more of a continuum or sliding scale. This view of development has definite consequences regarding education in that, as much as possible, children with special needs are included in regular educational settings rather than segregated in special education classrooms. Research has shown that this *inclusive education* approach leads to greater cognitive and social gains for young children with special needs than does segregation. Generally, children with disabilities are placed within specific groups only to determine eligibility for special services.

THEORIES OF EARLY CHILDHOOD DEVELOPMENT

What constitutes typical development and what makes it happen has long been the subject of debate, theory, and research. In the next three entries, the most influential schools of thought are explained, along with their influence on early education.

Maturationist Theories and Developmental Milestones

Early childhood research has led to the creation of certain milestones in development. Pediatricians use these during infants' and young children's check-ups and they also appear in parenting books and the popular press. These milestones tell the average ages, across large numbers of children, at which one might expect to see changes in cognitive, language, or motor development. Although such milestones provide a general set of guidelines, there is still a great deal of variation among children. The baby who walks at nine months is no less typical than the one who crawls until the thirteenth month. Toddlers who speak in complete sentences at age two will probably not sound much different at age six than children who begin talking after their third birthday.

A number of theories that attempt to explain how infants and children develop have evolved over the last century, but they can generally be classified into three basic groups. The first of these has its beginnings in Rousseau's image of children as developing in a natural way based on their inherent qualities and predetermined biological design. Today's versions of his ideas focus on internal biological characteristics as the basis for development. The best-known

twentieth century leader in this first group was Arnold Gesell (1880–1961) whose theory has been called maturationist. It was Gesell who, based on his observations of large numbers of children over many years, first laid out milestones and norms of development. A wide array of tests was used to determine the ages children might be expected to engage in, or improve their skills in, cognitive, social, and physical activities. Following is a brief overview of the norms for one skill: the child's ability to draw a circle at an examiner's request.

- 2 1/2 years: creates a circular scribble
- 3 1/2 years: can start but not finish successfully
- 4 1/2 years: makes an oval, drawn bottom up and clockwise
- 5 1/2 years: draws a lopsided circle, starting at top and moving counterclockwise

Gesell's view was that children could depart from such norms to some extent, but that too wide a divergence in a collection of tests would indicate a lack of readiness for school entry or promotion. One of the educational implications in schools that subscribe to the Gesell philosophy has been to create transitional kindergartens designed to give lagging children an extra year to get ready for the higher rigors of elementary school.

The second group of theorists has focused less on internal biological characteristics and more on the psychological. That the forefront of this approach was Erik Erikson (1902–1994) whose psychoanalytic model was based on his work with Sigmund Freud (1856–1939). Erikson's theory confined itself to emotional development and posited a series of crises that children must resolve at specific stages if they are to become socially and emotionally competent adults. For infants the crisis is identified as trust versus mistrust in which babies must, for example, learn to trust their mothers to feed them and not to drop them. Two- and three-year-olds face a crisis termed *autonomy versus shame and doubt*. Their focus is on things such as toilet training and saying "no" while still knowing that the adults in their lives will keep them from going too far. Initiative versus guilt is the crisis faced by four- and five-year-olds who possess great energy for big projects that may, or may not, get them in trouble, as well as possible obsessions with the opposite sex parent. As

children reach age six, the crisis that will carry them through the elementary years is industry versus inferiority, in which academics, friendships, and physical accomplishments can lead to success or failure in their eyes. Erikson's theory is often relied upon by early childhood teachers to better understand the emotional and social development of the children in their care (Erikson 1963).

Behaviorist Theories and Environmental Influences on Development

The third group of theories approaches development from external, environmental sources, rather than from the internal sources of the first group. The behaviorist theories in this third group have their long-ago roots in the writings of John Locke, who described the minds of infants as blank slates or empty cabinets to be filled by influences from the environment. Twentieth-century environmental theories had their genesis in the work of the Russian psychologist Ivan Pavlov (1878–1958) who conditioned dogs to salivate when they heard a bell ring, first by providing meat along with the sound and later simply creating the sound. John Watson (1849–1936), who studied with Pavlov, took this classical conditioning approach and applied it to infants and parenting practices. He believed that children were better served by discipline and consistent routines than by indulgence and demonstrations of affection (Watson 1928).

B. F. Skinner (1904–1990) took Watson's ideas a step further, observing that a behavior that is reinforced immediately is likely to be repeated; if it is ignored, it will generally disappear. The behaviorist orientation includes concepts related to reinforcement. Positive reinforcement, which might include such rewards as toys, praise, or hugs, is used to increase the frequency of desired behaviors. Negative reinforcement, which refers to something being taken away, can be observed when a misbehaving child is first required to sit between two children he doesn't prefer and then, when his behavior improves, is allowed to move where he would like. Punishment also figures into behaviorism, but Skinner and others have been opposed to it because of possible side effects such as anger at the punisher and a more likely return to the undesired behavior. Nonreinforcement is the term that describes the

ignoring of behavior. It can work if, for example, a child is behaving badly in order to get attention, then stops when none is given. Skinner's behaviorist ideas have long been put into practice in childcare centers, schools, and in homes, and are termed behavior modification (Skinner 1968).

A final mention in this group is Albert Bandura (1925–) whose social learning theory is based, to great extent, on the concept of modeling. His studies showed that young children who observed aggressive behavior became more likely themselves to behave aggressively. These studies also demonstrated that it is not always necessary to schedule immediate reinforcement since there was often significant delay between the modeling of the aggressive behavior and the children's imitation of it.

Constructivist Theories and Stage Development

The third group of theories base themselves on both the maturationist and behaviorist views of development, and is generally referred to as interactionist. Theorists in this group believe that each of the two preceding theories has something to offer but is not complete in itself since both biology and environment must be considered. In the introduction to this chapter, the two most important contributors to interactionist theories, Jean Piaget and Lev Vygotsky, were described along with their views. In this entry, the cognitive and social/moral stages posited by Piaget will be explained, along with the educational implications of each. Movement from one stage to the next occurs over many experiences and Piaget provided several concepts to explain what happens. He said that humans who are in the process of learning experience a kind of disequilibrium because they are provided new information that doesn't match with the knowledge they had previously. If the new information is very discrepant, then their mental structures must accommodate the input to deal with it. If it is only partially new, they engage in the relatively easier *assimilation* in which previous knowledge is simply refined. As an example, if infants are given a "sippy cup" to drink from and have previously had access only to their mothers' breasts, their comprehension must accommodate this totally new form of getting nourishment—a truly big leap. If, on the other hand, they are provided with a bottle as a step away

from the mothers' breasts, the experience will be new but the use of a nipple will be familiar and only assimilation is necessary. In most of life, both accommodation and assimilation go on continually and frequently simultaneously. The following descriptions of the Piagetian stages cover the major events in development. In actuality, there are sub-stages as well, making a more complex series than the summary that appears here.

Sensorimotor cognition describes the earliest stage, which begins at birth and continues for about a year and a half to two years. Sensory information and motor activity interact at this stage to help infants learn about their surroundings. Sensory stimulation coupled with the opportunity to move provide infants with the best education. For example, crib mobiles that are tied to infants' wrists will move in a variety of patterns as the infants kick and wave their arms. Just as it is possible to deprive infants of sufficient stimulation for cognitive and physical growth, so it can happen that too much is provided. A confusion of colors, noise-making toys, and intervening caretakers can cause infants to seek out more restful areas to look at.

Preoperational cognition begins as youngsters begin to use language and toddle, no longer needing concrete, immediate actions to learn about their worlds. The stage continues for about four years, until such time as they are ready for school. Learning at this stage is egocentric, that is, toddlers and preschoolers see the world from their own points of view, not understanding that others might see the world differently. As related to cognitive development, they might, for example, not understand that a board game looks different to people sitting on the other side. They would also not understand that the others playing the game with them lack the joy they feel when they are winning. Thus, the egocentrism children feel at this stage is both cognitive and social/moral. Teachers of toddlers and preschoolers typically avoid competitive games, focusing instead on activities where everyone can win.

An important development at this stage is the symbolic use of language in conjunction with representational thought. Objects now have names that are pronounced more or less in the adult fashion, and one object can represent another (e.g., a cooking pot might be used as a firefighter's helmet.) By the end of the stage, most children possess the core grammar

of their native language, and possibly another if they live in a bilingual home. Representational play behaviors typically develop into full-fledged dramatic play. Teachers know to provide many informal language experiences as well as materials and opportunities for dramatic play that reflect children's real worlds. The symbolic representations that children become capable of at this stage, along with other skills such as sequencing and classification, make first steps toward reading and writing possible. Efforts by teachers to enhance these emerging skills are typically informal, primarily introducing children to concepts of print, left-to-right reading, spaces between words, and so on.

Toward the end of kindergarten, preschoolers' characteristics tend to fade and be replaced by the Piagetian stage that will take them all the way through elementary school: concrete operations. Children now have an easier time seeing both physical and social situations from viewpoints other than their own. A higher level of understanding of symbolic representation makes learning to read much easier. Increased skills in classification, sequencing, and regrouping make it possible to teach school mathematics. Because children's core grammar is complete, the more formal school grammar can be introduced.

SUMMARY OF THEORIES AND THEIR INFLUENCE ON EARLY EDUCATION

All of these advances, however, do come with limitations. Children in the early grades are still focused on the here and now, the objects they can readily see, touch, and feel and, in general, the physical attributes of the world around them. They are also inclined to focus on a single physical attribute at any given time, making complex and abstract concepts too difficult for them. In the primary grades, teachers are careful to include many "hands-on" materials that can be manipulated for greater understanding.

In summary, it may be said that theorists and philosophers have been positing stages of development since Rousseau in the eighteenth century, while educators and caregivers then attempt to find ways to apply these concepts to better serve their children. It may also be said that, although the various stage theories might seem on the surface to be independent of each other, they can often be intertwined to achieve

a fuller understanding of young children. As an example, Gesell's vision of the four-year-old was of a child full of exuberance, enthusiasm, energy, and a tendency to take behavior out of bounds. Erikson described the crisis at this age as one of initiative versus guilt, that is, having enthusiasm for taking on big projects while dealing with feelings of guilt about misbehavior. From Piaget's perspective, the four-year-old was egocentric, seeing the world from a self-view. This can lead to difficult social interactions when the four-year-old misbehaves and isn't capable of understanding why others don't see things the same way. Thus, while Gesell, Erikson, and Piaget created quite different stage theories, they are in many ways compatible.

In addition, the different domains of development that each theorist studied are intertwined, each one affecting the other in some way. Vygotsky worried about this when he observed the difficulties deaf children had in participating in group activities that would not only enhance social development but cognitive understandings as well. Piaget's own research indicated that, while cognitive development can outstrip social/moral development, it does not work the other way around. In other words, children need a cognitive capacity to understand and explain their ethical decisionmaking. Other examples include the importance of language development to children's social interactions, and increasing physical mobility as important to infants' and toddlers' growing understanding of their physical environments.

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SUPPORTING ORGANIZATIONS

National and international organizations have been important to the health, continuity, and growing acceptance of early childhood as a vital stage in education. There are three in particular that have forwarded, and continue to champion, the cause of education for infants and young children.

The largest and best known of these is the National Association for the Education of Young Children (NAEYC). This organization was begun in 1926 as the National Association of Nursery Educators

(NANE, pronounced "nanny.") As NAEYC, it now focuses on children from birth to age eight. Most members are childcare workers, center directors, teachers, college faculty, or parents. Annual conferences are some of the largest pertaining to education. In recent years, a primary contribution of NAEYC has been its publication of a number of influential position papers. In the 1980s, early childhood professionals, dismayed by the national tendency to water down elementary curriculum for young children as a part of the so-called back-to-basics movement, determined to make curriculum and pedagogy more developmentally appropriate. To that end, *Young Children*, the official journal of NAEYC began to publish position papers laying out the most up-to-date perspectives on early development and the kinds of learning that would and would not be appropriate in centers and classrooms. In 1987, the organization's landmark book, *Developmentally Appropriate Practice in Early Childhood Programs* was published, with input and approval from other related organizations. In the book, position statements were made and then expanded upon to describe, very explicitly, appropriate and inappropriate ways to treat and teach young children. Presentations at conferences were used to expand and explain further. Readers of the book and attendees at the conferences came away well-informed, and returned to their centers and classrooms with the knowledge that their largest early education organization backed their use of what had come to be known as developmentally appropriate practices, or "DAP." To a great extent, the back-to-basics movement was averted in early childhood education and curriculum appropriate to young children became more the norm. Ten years later, a revision of the book was published and it too is widely used across many kinds of sites (see Bredekamp and Copple 1997). NAEYC also instituted a set of standards for early childhood postsecondary programs as well as a procedure by which individual centers can become accredited by the organization. In addition to *Young Children*, NAEYC publishes a research journal and an extensive collection of books for teachers. It is headquartered in Washington, D. C.

A second organization, the Association for Childhood Education International (ACEI) began as the International Kindergarten Union (IKU) in 1892,

and then joined with the National Council of Primary Education in 1931 to become the Association for Childhood Education International. From the beginning, its inclusion of an international element was a way of signaling its interests in children worldwide. It was also active, in the late 1940s, with helping young children in the postwar reconstruction of Europe. Like NAEYC, ACEI creates position papers, some of them focused on early education and care. Like NAEYC, it holds annual conferences where teachers can share and receive new ideas for working with children. It too publishes a journal, *Childhood Education*, a research journal, and a number of books. It is headquartered in Olney, Maryland.

The Organization Mondiale pour l'Éducation Préscolaire (OMEP) is the most international of the three organizations. In the United States, OMEP is usually referred to as the World Organization for Early Childhood Education. Representatives from several European countries began it in 1946 (see *Global Guidelines from an International Symposium*). Its first international conference and official founding in 1948 included representatives from nineteen countries from around the world. It has expanded since then to more than sixty nations and has maintained close ties to UNICEF, UNESCO, and the Council of Europe. Members are dedicated to sharing information about and supporting the well-being of children throughout the world. In particular, the organization has been active in cross-nation help for children in distress or high need. In addition, OMEP has been closely linked to support of *The Convention on the Rights of the Child*, an international document that lays out the rights children should have within their families, cultures, and countries. A few of these rights include: survival and development, an adequate standard of living, effective health services, childcare services and facilities, and no discrimination due to such things as race, sex, or religion. (The United States is one of two countries that has refused to sign the document, finding several politically controversial points.) Like the other two organizations, OMEP publishes a journal, the *International Journal of Early Childhood*. Copies of *The Convention on the Rights of the Child* are also available from OMEP.

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ESSENTIAL ELEMENTS OF THE SETTING

The environment of a childcare center or school is not just physical but social and emotional as well. As such, it includes the impact of adults on children's learning and well-being. All of these elements are discussed here.

THE PHYSICAL ENVIRONMENT: INDOORS

The first element essential to the early childhood setting is the physical environment. A major reason for this is safety, given the helplessness of infants and the awkwardness of toddlers, preschoolers, and even to some extent primary-age children. A second reason to focus first on the physical setting relates to the methods by which young children learn. Infants learn almost exclusively through their senses and physical movement. Even through the primary grades, hands-on materials are essential to learning. A final reason for a focus on the physical environment is the necessity of somehow coordinating two essentials that are inherently in conflict: provision of physical safety and, as well, a developmentally stimulating environment. The latter assumes the need for young children to be mobile and follow their curiosity, while the former would seem to negate such behavior.

Nevertheless, the need to coordinate safety with curiosity and mobility has been recognized internationally and officially. A 1999 international symposium sponsored by the Organization Mondiale pour l'Éducation Préscolaire (OMEP) and the Association for Childhood Education International produced a document in which an environment both safe and stimulating was described as essential. A safe environment, according to this document, includes: freedom from physical hazards including unsafe equipment, pollution, and violence; basic sanitation, including safe and nutritious food and potable water; and clean and well-maintained equipment and physical structure. To be developmentally stimulating, the environment should include opportunities for: frequent and positive child-child and child-adult interactions; engaging in active play and

movement; playing, exploring, and discovering; thinking critically and creatively through using an abundance of materials; playing outdoors on equipment that provides a variety of movement possibilities; and extending play to include constructions, gardening, natural habitats, and walking paths. In general, the environment should be aesthetically pleasing and attractive to children with a variety of colors, textures, surfaces, visual dimensions, and perspectives. However, this environment should not be static, but evolve over time with children (who are old enough) invited to participate in its creation and organization.

When infants are provided with opportunities to learn to crawl, interact with mobiles, or explore toys with all their senses, the environment is providing stimulation. Safety is provided when crawling surfaces are soft, mobiles are kept out of reach, and toys are washed after each child's use. Toddlers need room to run as well as walk, to choose toys on their own, and learn to get on and off furniture. Safety for this age includes open spaces with non-slip rugs or shock-absorbent tiles, low shelving with an uncluttered collection of toys, and furniture that is free of protruding metal parts and sharp corners. Preschool and kindergarten children can engage their curiosity in a widening array of activities not safe for infants and toddlers. They ride tricycles; throw and catch balls; add jumping, balancing, hopping, and skipping to their increasingly competent walking and running; develop their fine motor skills with puzzles, bead stringing, woodworking, cutting and pasting, and small blocks; and learn about books and reading through many preliteracy and literacy activities. Safety for these ages is provided when climbing equipment is regularly checked for stability and good repair, use of scissors and woodworking materials is introduced with instructions and rules, and active experiences are monitored by adults. By the primary grades, safety is not as much of an issue, but equipment must still be kept safe and instructions and rules must accompany the use of potentially dangerous materials. It might be said that the main concern with infants is their total safety while, in the primary grades, the situation reverses and the main concern becomes the provision of a stimulating environment that encourages and promotes children's intellectual curiosity. At both ends of development, however, both safety and stimulation remain important.

Other aspects of the physical environment include the building's structure; colors of walls and furniture; arrangement of furniture and materials; the amount of space; décor, including children's art work, teachers' charts, posters, and signage; and outdoor facilities.

Each of these physical elements will vary depending on the ages of the children served. While children in public primary grades can expect an institutional setting, buildings for infants and the youngest children are generally as homelike as possible; indeed, they are often actually homes. Colors of walls and furniture may be determined by a central office but, if not, modern color theory may come into play. For example, a vibrant red may be appropriate for large motor activities, but the more calming yellow, purple, or green are preferred for nap and other quiet areas. Indoor space is divided, in part, by the necessities of the space provided. With that as a given, there are generally fewer divisions for infants and toddlers, with simple arrangements remaining stable over time due to the need, at this age, for stability. More divisions and greater flexibility are possible in rooms for older children, who generally enjoy change. Divisions may be created by using moveable walls or, more commonly, by arranging furniture such as bookshelves to create barriers. Decisions about divisions are influenced by spaces that will have activities that will be wet or dry, quiet or noisy. Nap areas, for example, are not placed next to block building or dramatic play. Messy art activities are placed next to a water source. Reading corners are found in quiet sections. Once the room has been divided, decisions are made about the décor. For infants and toddlers, pictures or murals are placed on walls both at their crawling, toddling level and at the adult level for times when children are being held. Colors are vivid, designs simple and straightforward. Preschoolers and older children respond well to prints of gallery artwork placed at eye level. Teachers of children who are learning to read typically include posters that require some basic literacy. Finally, the furniture itself is of importance. Shelves are generally open and at child height so that children learn responsibility and decisionmaking when they choose materials and replace them correctly. Toddler rooms typically have fewer shelves containing a small array of choices, with these becoming more complex as children get older. Younger children are typically

provided with small chairs and tables; primary grades may have tables and chairs as well, or they may have desks. At all ages, safety is important, with greater measures necessary for infants, toddlers, and younger children.

THE PHYSICAL ENVIRONMENT: OUTDOORS

In the mid-nineteenth century, the Froebel kindergarten included outdoor experiences that provided children with opportunities to interact with nature as well as to create and care for carefully structured gardens. This balance of nature and cultivation has continued to be featured in many centers and schools down to the present. Added to them has been an increasingly sophisticated approach to outdoor play equipment. For the youngest children and toddlers, materials tend to be flexible in their uses. A house-like play structure, for example, might be used for any number of dramatic play scenarios. Loose materials often include tricycles, wagons, toy trucks and cars, and blocks. Smaller toys are frequently made a part of sandbox play. Climbing and swinging equipment is appropriately sized. The ground surface may be pea gravel for preschoolers due to its soft landing attributes. For toddlers, however, concerns about what may go into their mouths makes a grass lawn more attractive.

Kindergarten and primary grade play areas typically contain more traditional playground equipment that includes swinging, sliding, and climbing pieces. So-called adventure playgrounds that provide building materials and tools, to be used under adult supervision, were widely popular in the late twentieth century, but are less commonly seen today.

THE SOCIAL-EMOTIONAL ENVIRONMENT

The social-emotional environment of the center or school is as important as the more visible physical environment. Children's developmental characteristics at different ages must be taken into consideration as this environment is established. In this entry, the characteristics of each age are coupled with a description of the appropriate social-emotional environment.

Early sensory experiences and interactions with

others, primarily adults, provide infants with the stimulation necessary for early brain development. In addition, it is currently believed that the same interactions foster neural connections that relate to emotional control. Environmental conditions that inspire emotional reactions in infants include feelings of comfort and discomfort, predictable routines or lack of them, and interactions with family members and strangers. Social and emotional behaviors become increasingly complex in the infant's first year as behaviors such as smiling, laughing, and engaging in different sorts of crying appropriate to the occasion evolve. Frustration or anger can result not only in crying but screaming, head banging, or throwing toys.

Knowledgeable infant caregivers react to such behaviors in positive ways, not regarding them as punishable. Rather, infants are redirected toward less frustrating activities, are made more comfortable, perhaps by a diaper change or between-meals snack, or are simply held for a while. According to the theories of Erik Erikson (1963), the important emotional development at this stage is one of trust. Because infants are totally dependent on their caretakers for their safety and general survival, the self-confidence that comes with total trust is essential for emotionally healthy entry into toddlerhood.

Toddlers demonstrate an increasing sense of self when they not only recognize themselves in mirrors but in photographs as well. Further, they can refer to themselves by name. The physical separation from caretakers that is now possible because of the development of self-feeding and walking skills provides an additional contribution to the sense of personal identity. As toddlers develop a sense of themselves they also become capable of more differentiated emotions, expressing fear, doubt, jealousy, even hatred. To these is added the hallmark attitude of this age: independent decisionmaking or, as Erik Erikson would have it, autonomy. The development of independent thought leads inevitably to occasional differences of opinion, expressed by even the most nonverbal toddler as a simple but adamant "no." Possession of desirable toys can be important as well, giving rise to a second critical word in the toddler's vocabulary: "mine." As toddlers focus on their increasing sense of identity and the importance of their own needs, they also take the first steps toward learning about the social world. As defined by Jean Piaget, the social stage

of toddlers is one of great egocentrism since it is necessary to understand oneself before it is possible to understand the needs of others. Thus, when the toddler declares that a toy is “mine” and grabs it from another child, it is not so much selfishness talking and snatching, as it is a lack of knowledge about what the other child thinks or needs.

Caregivers of toddlers continue the approach of the earlier stage in which babies are not punished, but are redirected to other activities and materials. As in infancy, physical comforting may also be necessary; although toddlers desire autonomy, they still have a strong attachment to their caregivers and depend on them for safety and unconditional affection. Because of the need for close and attentive adult care, there are typically state laws requiring high adult-to-child ratios. The social atmosphere of a childcare center for toddlers is one in which newly mobile babies can play individually if they prefer, while occasionally and briefly interacting with their peers. There are enough of the most desirable toys to go around, thus avoiding conflict. Shelves are low to the ground so that toddlers can independently choose what they will play with. The numbers of choices are limited to ward off frustration and feelings of being overwhelmed.

Younger preschoolers still possess most of the social and emotional traits of toddlers but, by the age of about four, have begun to take on new characteristics. Erik Erikson saw this age as one in which there is great energy and initiative. Awkwardness may accompany new endeavors and mistakes may be made, but stores of energy and enthusiasm for new initiatives typically impel children to leave the negative experiences behind and focus on new ones. As at the toddler stage, independence is important, but the four- and five-year-old's increased understanding of how the world works makes it feasible to move beyond the temperamental “no” and understand simple explanations.

Socially, according to Jean Piaget, preschoolers and kindergarteners are still, to great extent, egocentric, but they are beginning to understand that others may have different points of view. Still, their egocentrism typically prevents them, in a tense social situation, from acting toward anyone's advantage but their own. Further, their own emotional and social egocentrism often impels children to mentally transfer what they want to the thoughts of others. “I hit him because he wanted to be hit” is a statement that can sound quite

logical to a four-year-old and occasionally justifiable to the five-year-old. Children at this stage, as they contemplate their social interactions, focus on physical attributes as a way of making decisions. For the four-year-old, sharing can take place, less because of altruism, than because of someone else's greater size or perceived attractiveness. Five-year-olds, who are learning math concepts such as classification, believe that the only fair way to share is for everyone to have exactly the same, no matter what the situation.

Preschool and kindergarten teachers continue, as in the toddler years, to offer nonsocial, individualized experiences to these children who are in the beginning stages of understanding social interactions and the views of others. At the same time, well-supported group activities become an increasing focus. Because continued egocentrism makes competitive experiences highly emotional, games and sports typically do not have winners and losers. Circle games and noncompetitive versions of team sports help young children learn about rules without the trauma of the standard versions.

As children complete kindergarten and enter the primary grades, they also begin a major shift in their social and emotional behavior and understandings, leading to new considerations for the classroom environment. It was Piaget's observation that children of this age begin to acquire an adult understanding of rules. Prior to this age, rules were viewed simply as an extension of an authority figure's power over young children and, therefore, had no truly rational reason for being. Now, however, it is understood that rules are created for the good of the order, that they can be created by many people at various levels of authority, and that if they are found to be defective, rules can be changed. Primary grade children can become intensely interested in rules. They may be especially focused on how well others are obeying the rules, and demonstrate this by extensive tattling.

It is also during the primary grades that children become somewhat less attached to adult caregivers and teachers and more interested in the concerns of their peer group. Friendships create cliques; play times lead to gangs. Through these years, youngsters learn to see issues from others' points of view. Conversely, they wonder how others see them, leading to insecurities and concerns about the effects of their behavior or clothing choices. Taken together, the interest in rules and peer groups fosters the abilities

necessary for learning team sports. Because some of the early childhood ideas about rules, fairness, and authority still persist through the primary grades, both patience and careful teaching are necessary, however.

The explanations of primary-grade social development that come from Piagetian theory are well complemented by Erikson's descriptions of emotional development. Just as children begin to learn the adult definitions of behavior according to rules, so they begin to attain the school tools and skills that will eventually take them into adulthood. Erikson viewed these years as a time of industry, a time between the emotionalism of toddlerhood and puberty, when children are able to focus on their productivity. He saw children at this stage as having persevering diligence and an ability to work alongside and with others.

The implications of these new developments for the classroom environment are several. Furniture may consist of either tables or desks, but typically they are placed so that small groups of children can work together. Children who are not yet ready for or interested in working with others may be placed singly or permitted to work alone as they desire. Teachers also know that, because primary children are only in the beginning stages of group behavior and peer orientation, that there will be times when they must be ready to provide aid, comfort, and guidance on an individual basis.

The interest in and increased understanding of rules is often channeled into the creation of a so-called learning community in which the children themselves help design the social structure of the class. This can include having the children set the rules and also the consequences of breaking them. Academic study groups can, at times, be created by the children with the teacher's help. Social interactions, problems, and dilemmas found in the classroom and on the playground are discussed by the children in class meetings. In general, the atmosphere of a predemocracy can foster the development of children at this stage.

ADULT INFLUENCES ON THE ENVIRONMENT: TEACHERS, AIDES, AND PARENTS

In the school or center, a major contributing factor to a positive or negative environment is the relationship between staff members and children, among staff members themselves, and between staff members and

the children's parents. Infants and young children may not understand the underlying emotions between these relationships, but they intuit them and are affected by them.

A primary characteristic of the effective early childhood teacher is a strong understanding of child development. This includes knowledge of theories related to cognitive growth such as those of Jean Piaget, Lev Vygotsky, and Arnold Gesell; social-emotional theories such as Erik Erikson's; and social learning theories such as Albert Bandura's (1963). Although these theories may at times be somewhat in conflict with each other, effective teachers make practical use of their strengths, applying them to their daily interactions with infants and young children.

Although there is no one personality type that is appropriate for teachers, there are some characteristics that can enhance the teacher-child environment. Understanding of child development should lead to acceptance of children's behavioral stages rather than dismay at some behaviors and an attitude that children are defective adults in need of punishment. The successful teacher is respectful of young children's cognitive capabilities, understanding that, although they are less informed than older children or adults, they are learning more rapidly now than they will at any other time of their lives. Respect for children's learning capabilities leads to the teaching of meaningful activities that children will take seriously, although such experiences may still provide fun, even entertainment. The teacher who both respects children and understands development rejects learning activities that simply "water down" curriculum more suitable to older children and will, instead, focus on what is interesting and appropriate to the age. Finally, the early childhood teacher must be capable of true warmth toward young children and a mature relationship with them. The latter indicates that teachers and caregivers must not bring to the relationship any of their own emotional vulnerabilities, but must focus on the needs of the children.

With all that the care and teaching of infants and young children entail, early childhood education remains an underpaid profession, thus making high turnover of personnel an ongoing problem. Unfortunately, it is at the earliest stages of life when stability in relationships is most essential. Thus, one more characteristic important to early childhood professionals is dedication.

One way to support the important work of teachers is to provide them with the help of other adults. In the United States, modern-day teaching assistants or aides were first used in Michigan in the 1950s. On a nationwide scale, they came into being in the 1960s through President Lyndon Johnson's "War on Poverty" and the establishment of Head Start preschools for economically disadvantaged children. The idea was that teachers could do a more effective job if they were less burdened with nonteaching duties and that these could be taken over by unemployed men and women who were frequently from minority groups.

Today, within one classroom or infant room, the number of adults present is generally prescribed by state and/or local law. In the preprimary years, there is almost always at least one assistant for each teacher. The assistant typically engages in environmental tasks (decorating bulletin boards, keeping supplies on hand, collecting lunch money, setting up for lunch), or supervisory tasks (leading the group to the playground or assemblies, monitoring outdoor play, watching over the class as a whole while the teacher works with a small group), or even instructional duties (reading a story to the class or a small group, listening to children read, team teaching a lesson.) At times, young children become as attached to the assistant as to the teacher, thus emphasizing the importance of between-adult harmony. Training the assistant to engage successfully in the desired activities becomes a critical duty for the teacher in charge.

In addition to teaching assistants, parents can provide teachers with help. Today's parent involvement with school and center has its origins in the "free kindergarten" movement of the mid-nineteenth century. Wealthy philanthropists donated their efforts toward creating kindergartens for the children of the growing population of immigrants. In part, these were to introduce children and their parents to the American way of life and, thus, contained educational programs for both generations. Parents were instructed in literacy and parenting and provided with advice on finding jobs. Children were given an education largely based on the philosophies of Friedrich Froebel.

By the start of the twentieth century, kindergartens nationwide were increasingly housed in public schools and the parent education component not so automatically included. This was more likely to be structured through the newly emerging parent teacher

associations (PTAs). By mid-century, the rise of parent cooperative schools would again involve parents more directly but, by definition, from a more powerful position as they, themselves determined much of the curriculum and their own level of involvement. Also at mid-century, the PTAs began to focus their energies on providing support to the schools, and parent education was soon taken over by other public agencies. At the century's end, cooperative preschools and Head Start centers still provided opportunities for parents to help set policy.

In public-school settings, however, legislatures and local district headquarters had largely taken over this power. An emerging development became that of the so-called community school in which daytime education has been just one of the activities provided. At other hours, and even to some extent during the day, family resource centers and literacy programs provide extra opportunities. In other words, the trend has been toward a modern-day version of the mid-nineteenth century model. One view that both centuries share is that parents are children's first teachers. Today, however, this has meant a greater respect for what parents provide, rather than automatically assuming a deficit model in which parents must be brought up to the standards set by the school. There is generally some effort given to understanding and respecting cultural and family differences. When such efforts succeed, positive partnerships between parents and school or center are created.

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CURRICULUM, TEACHING METHODS, AND ASSESSMENT

A curriculum appropriate to young children, the assessment of its effectiveness, particularly for the purposes of improved future experiences, and the methods chosen to teach the curriculum are generally quite different than those for subsequent years. The reasons for this pertain to the unique aspects of young children's development: their learning is more rapid than that of older children and adults; they learn indiscriminately from everything in their environment, whether positive or negative; they are

focused on themselves, believing everyone else sees things from their perspectives; and they are just beginning to learn how to interact successfully with others.

TYPES OF CURRICULUM

A major approach to curriculum in the early years is to integrate the subject matter. It is argued by many early childhood professionals that young children do not learn about their worlds by dividing knowledge into academic subjects. Particularly through kindergarten, teachers focus more on topics of learning than on subject areas, although most subjects are covered in the process.

One typical way of integrating curriculum is through the use of themes. For example, children might spend one week studying each of several colors. One week could be devoted to orange and include eating oranges, preparing and drinking orange juice, seeking out objects in the environment that are orange, painting and coloring with orange, and so on. Other common themes include holidays, seasonal changes, clothing, transportation, and families. Theme teaching is especially popular in preschools where assessment according to academic subjects is a rarity. Themes provide an organizing structure for teachers and a focus for children's learning. A collection of themes might remain the same from year to year or they might change depending on the children's and the teachers' interests, or there might be a combination of the two approaches. Kindergarten teachers may also rely on theme teaching, but topics are usually studied for a longer period of time, are more sophisticated than those of the preschool, and are more likely to pay homage to academic considerations as well as to children's interests. As an example, a class living near a coastline might study ocean animals. Activities could include listening to factual stories, visiting an aquarium and dictating to the teacher follow-up reports, drawing and labeling pictures of sea animals, creating models of animal habitats, and role-playing the life cycles of various creatures. When themes are organized into a focused collection of activities such as these, they are usually referred to as thematic units.

A second approach to integrating curriculum that is less common than thematic units, but rising in popularity since the mid-1990s, is project-based

learning. While the teacher often prepares thematic units before a school year begins, projects are designed through collaboration between children and teacher. Topics might be suggested by the teacher, who will have observed children's behaviors and conversations, or by the children directly. A project might last a very few days or for many weeks. During this time, youngsters engage in research whether they are preliterate preschoolers or academically oriented primary children. For the youngest students, learning is reported through drawing, painting, modeling, or dictating stories to the teacher. Older children engage in these activities but also read factual books, write and illustrate reports, and make presentations. Project-based learning is often broken down into three basic steps: an exploratory period when children and teacher discuss topics of potential interest and vote on them; a learning time in which the research is done (this is the step that takes up most of the time); and a final sharing phase in which reports are made, dramatic play centers are created and played in, parents and others are invited to learn about the life of the project, and so on. Much early childhood writing for teachers, in recent years, has focused on how to work with children of varying ages to create successful projects. This approach to integrating curriculum is more complex and difficult than thematic units because a large degree of power is given to children, and teachers must learn to support their learning rather than directly lead it.

Although teachers frequently make use of themes and projects, they must still attend to the academic subjects. This is particularly true in the primary grades and even in kindergarten where subjects are often not integrated but taught individually and explicitly. Although each subject is important, reading, writing, and oral language are, perhaps, universally accepted as the primary focus for academic learning in the early years. For any English-speaking country, intense efforts are required to help children make sense of a complex system of spelling and phonics. Researched approaches to helping children achieve mastery are several and frequently in such conflict with each other that disputes between the proponents for each have been termed "the reading wars." Increasingly, since the late 1990s, attempts have been made to find a compromise and to help teachers choose whatever approach works best with each individual child. Thus, there may be in any one kin-

dergarten or primary classroom a mixture of instruction that includes a focus on teaching phonics skills (with drills and tests to ensure success) as well as a preference for “whole language,” an approach that integrates reading, writing, and oral language, and that eschews drills and tests. Current theories of young children as literacy learners include the view that they do not arrive at kindergarten or first grade ready to begin learning, but that they have been gaining literacy knowledge their entire lives. The concept of emergent literacy recognizes that some children come to school reading, others prepared to read immediately, and still others in need of introduction to the world of print. Teachers of infants, toddlers, and preschoolers devote much effort to providing literacy-related experiences to prepare them for upcoming school expectations.

Mathematics for very young children includes concepts such as many, few, more, less, etc. Geometry is also a focus. Children only gradually attain a true understanding of number, although they may be able to rote count as soon as they can talk. Historically, there has been a disagreement as to how best to teach children arithmetic facts that mirrors the disagreement surrounding literacy education. Drill and practice may be efficient but may also not help children achieve understanding; learning facts in the context of interesting stories and games may make children more attentive, but their skill levels may not achieve automaticity. A combination of the two approaches is typically found in classrooms for young children. Whatever method(s) may be chosen, early childhood teachers are careful to include concrete materials that can be manipulated. Young children are incapable of achieving mathematical competence when provided simply with abstract concepts, pencils, and paper.

Social studies education reflects the fact that young children understand the here and now long before they grasp concepts related to distant geographies and long ago history. Geography, if it includes mapmaking for example, might focus on mapping the school or the neighborhood. History could include a study of the children’s families. Civics might simply pertain to learning to make classroom rules, economics to using play money in the dramatic play center’s store.

Science, like social studies, typically pertains to children’s own worlds and this frequently includes a

study of the neighborhood flora and fauna. Pets might be brought from home and their species studied further. Simple physics experiments on familiar materials can be carried out, although deep understanding of cause and effect is not expected.

The arts are important to early childhood education, with more time devoted to them than is typically observed in the later years of schooling. Drama is an integral part of most early childhood classrooms with dramatic play centers in almost daily use. Here, children are provided with materials and costumes that carry out themes related to daily life or to a current theme of study. Materials are generally to be used in unscripted free play. Music also, for the most part, stays close to children’s known lives. Songs may reference people or animals commonly found in their environment or familiar fantasy themes. Additionally, adult music is often introduced, usually for listening purposes as well as for free dancing opportunities. The visual and decorative arts reflect those engaged in by adults such as painting, sculpture, collage, embroidery, and so on. For the youngest children activities could include “painting” with water on the sidewalk; simply pounding and squeezing play-dough to better understand its attributes; or gluing a few recently collected leaves on a piece of colored paper. Painting is typically done at easels where color-mixing experiments might be encouraged and nonpermanent paints are easily washed out of clothing. In many sites, art materials are available at all, or most, times for children to choose as they prefer.

Formal physical education is generally not taught until the primary grades or, at the earliest, kindergarten. Early childhood educators more often refer to movement education in which skills related to stability, motor development, and manipulation are taught. Activities that encourage stability or balance include walking on balance beams, climbing in and out of large inner tubes, swinging and landing, and stopping and freezing after running. Locomotor skills, those that help children move through space, are enhanced through activities such as crawling, running, jumping, hopping, skipping, galloping, and climbing on equipment. Other movement activities that don’t involve moving through space include bending, stretching, and twisting. Manipulative skills often combine stability, locomotor, and nonlocomotor abilities and can add work with balls,

bats, beanbags, and Frisbee discs. Movement education in the early years is most generally taught in a playful, noncompetitive atmosphere.

METHODS OF TEACHING AND LEARNING

Learning through play is a longstanding and respected methodology in early childhood education. “Play is the work of the child” is a saying attributed to kindergarten creator Friedrich Froebel and quoted freely ever since. Through play, infants and toddlers experiment with and learn about the physical attributes of their surroundings. Preschoolers and kindergarteners are given more complex materials but these, too often provide opportunities for learning through play. Even in the early grades, new learning materials are often introduced by letting children freely play with them for a while. Teachers who subscribe to the constructivism of Jean Piaget and Lev Vygotsky believe that permitting children to play encourages both cognitive and social development. Many writers and researchers consider play to be a primary, even *the* primary, developmentally appropriate method of fostering young children’s development.

Another methodology used in early childhood education is direct instruction. This is more complex than simply instructing children directly and includes little, if any, lecture presentation. The purpose of direct instruction is to teach a skill or procedure and, in early childhood, this may be a necessary first step before experimentation or play can take place. There are four basic steps to most direct-instruction lessons: the teacher’s demonstration of the skill or process, teacher-guided practice for the children, independent practice, and (possibly) transfer to other situations. An example of how this might work can be seen as the class prepares to take a field trip to the neighborhood grocery store. First, the teacher talks through appropriate behavior such as walking with hands behind backs or in pockets (demonstration of process). Then, as the teacher observes and comments, the children practice walking through the classroom with hands behind back or in pockets (guided practice). Third, the children take their field trip and remember how they should walk (independent practice). And, finally, a while later a second field trip is taken to the local museum and the chil-

dren demonstrate that they still know how to walk correctly (transfer of learning).

In addition to play and direct instruction, another commonly utilized method is known by several names such as learning centers, activity centers, center time, and free choice time. Teacher-selected materials are placed in centers throughout the room or on shelves around the edges. If the former, children work and play with the materials where they are housed. If the latter, materials are brought from the shelves to tables or desks. Direction of the experience can come from the teacher who allots a fixed amount of time to each center, signaling the children when to move on to their next assigned center. Direction can also come from the children who select the centers and materials they wish to interact with. Teachers choose materials for the centers based on children’s interests and the current curriculum (integrated, themed unit, individual academic or arts-related subjects, or a combination of these.)

ASSESSMENT AND EVALUATION

Assessment is the process of gathering information and evidence about classroom learning. Early childhood educators continuously engage in three kinds of assessment: of the effectiveness of the curriculum and teaching methods, of the children’s progress, and of the general program. As assessment information is collected, it is analyzed and evaluations are made so that improvements, new directions, or continuations of current practices can be decided upon.

Throughout the early years, multiple forms of assessment are used to document children’s cognitive, language, social, emotional, and physical development. These assessments can include samples of children’s work, such as pictures, three-dimensional art projects, and beginning attempts at writing; teacher’s notes regarding conversations; observations of child-child interactions or play and work habits; and notes kept of interactions with parents. To these everyday sorts of data are added less frequent standardized tests that may be given to assess individual children’s skills or to evaluate the progress shown in an entire program. Typically, the decision to use standardized tests is made, not by teacher, school, or center, but by government agencies.

The so-called accountability movement of the early twenty-first century has led to more focus on stan-

dardized testing, including for the early years in education. The National Association for the Education of Young Children (NAEYC) has long held the position that day-to-day documentation provides more valid assessment results than the snapshot views provided by formal tests. Young children who excel on a test one day may do badly the next because of lack of consistency in development, mood changes, hunger, fatigue, and a general lack of understanding of the need to perform well on an important test. In 2002/2003, the NAEYC joined with the National Association of Early Childhood Specialists in State Departments of Education (NAECS/SDE) to write a position statement officially expressing such concerns. It is their shared position that accountability should be based on a variety of documentation of children's gains over time, using multiple sources of assessment. During this same time period, a mandate from Head Start was ensuring that programs nationally would carry out standardized tests on children's cognitive gains as a way to determine increased funding of Head Start programs. Appropriate assessment and evaluation in early childhood programs remains a controversial area.

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MODELS OF EARLY EDUCATION

Based on everything from informal, personal observation to quantifiable research, a number of educational models have been created for young children. Some have been in existence for close to a century, while others have emerged in recent decades. Those described in this entry are among the most visible and frequently referenced by professionals in the field. They are described in alphabetical order.

HEAD START PROGRAMS

Head Start is a federally funded program that has existed across the United States since 1965. It began as one component of President Lyndon Johnson's "War on Poverty," a vast national effort that instigated a variety of social programs. Originally conceived as a summer program for economically disadvantaged children about to enter kindergarten, Head Start was to

focus on children's social development and health. Soon added were academic experiences, parent involvement and education, and a full-year program. The benefits to young children were immediately apparent to kindergarten teachers and the children's families, and the program continued to receive expanded congressional support until 1969 when the Westinghouse Learning Corporation was hired to evaluate the continuing progress of Head Start graduates. It was found that most gains demonstrated by the children upon kindergarten entry were lost during the primary grades. Suddenly, congressional support faded along with that of President Richard Nixon, who had initially adopted his predecessor's enthusiasm. There followed a number of years in which Head Start fought for its existence, a situation which was at least partially resolved when children who had graduated from federally funded preschools were once again evaluated in their mid-twenties. It was then found that, compared with their peers who had not attended such programs, the graduates were more likely to own homes, to have graduated from high school, and to have attended college, and less likely to end up in prison, or need social services. Congressional support again became more positive and a variety of programs became available to children and their families.

The yearlong model for four-year-olds remains the best-known and most common Head Start program. The Follow Through program was added to assist children in retaining their early gains throughout the elementary years. As the importance of learning opportunities from birth onward became better known, other programs were added. Early Head Start is designed to help parents either in their homes or in the center. Its primary purpose is to provide parents with a better understanding of positive interactions with their children from birth through age three, but it also helps parents learn ways to meet their own life goals. Home Start is specifically designed to give three-year-olds preparation for the regular Head Start program they will have the following year. Although teachers visit the homes to provide children with learning activities and their parents with teaching ideas, the children may well make occasional visits to the four-year-olds' program to prepare for the upcoming year. Even Start serves young children equally with their parents. While the children attend Head Start, or even elementary school, their parents are provided with English as a Second Language (ESL)

training, literacy education, vocational training, or help in working toward a general equivalency diploma (GED). Whatever academic program is needed or chosen by the parents, they are also provided with parenting classes.

HIGH/SCOPE PROGRAMS

This approach to early education began in the early 1960s with funding from both federal and private agencies. The original center, in Ypsilanti, Michigan, collected economically disadvantaged children from the neighborhood of the Perry Elementary School and became the Perry Preschool. Children were provided with an education based on the psychological principles of Jean Piaget, in which they were encouraged in their self-construction of knowledge. In succeeding years, the curriculum has evolved, but the basic underlying philosophies have remained the same. The founder and driving force behind the establishment of the preschool was David P. Weikart (1931–2003), who not only contributed the philosophy and teaching approaches but immediately began to collect data on the entering children, thus providing the baseline needed for follow-up research years and decades later. In 1970, Weikart founded the High/Scope Foundation, an independent, nonprofit research and development organization. Today, the foundation provides training and advice to early education sites across the United States as well as internationally. A demonstration preschool remains in Ypsilanti. Close to 40 percent of all Head Start programs use the High/Scope approach to teaching and curriculum.

At the core of the program is a series of “key experiences” deemed essential to young children’s development. Grouped into ten categories (language, literacy, classification, seriation, number, space, time, creative representation, movement, and social representation), the key experiences are provided by teachers on a daily basis. The method of teaching involves little direct instruction and relies instead on the children’s interests to guide them in exploration, problem solving, planning, and interactions with other children and adults. Youngsters are not, however, simply let loose to do as they choose. There is a “plan-do-review” sequence that requires them to think about what they will do, carry out their plans, and then reflect on the experience.

Although High/Scope is not a Head Start organization, the two maintain close ties. In addition to providing training and advice to many Head Start centers, High/Scope has participated in studies evaluating some aspects of Head Start and offered support through advocacy activities. The Perry Preschool Project was the first to provide a long-term follow-up study of preschool graduates when they were in their late twenties. It was found that, as compared to children who had not attended preschool, the Perry children were far less likely to be arrested or give birth out of wedlock, and more likely to engage in higher education and earn enough to buy a home and a second car. These findings went far toward convincing Congress that federal funding for preschool education was worth continuing.

Another study, begun about the same time, compared three models of early education for children from financially disadvantaged families: High/Scope with its child-centered curriculum and teaching, direct instruction with high intensity teacher-led lessons, and traditional nursery school with a child-centered approach that contained less structure than the High/Scope program. By age fifteen, graduates of the nursery school and High/Scope programs were less likely to be delinquent from school or to need special education for emotional impairment. By age twenty-three, these two groups were more likely to be living with their spouses, aspire to higher education, and have fewer arrests than the graduates of the direct instruction program. The authors of the study attributed the differences to the sense of personal and social responsibility fostered by the preschool programs in which children were given some power over their own lives.

MONTESSORI EDUCATION

This model of education is named for its founder, Maria Montessori (1870–1952). Her birth occurred the same year that Italy became a unified nation rather than a collection of independent states. The idealism and optimism of the new country expanded the educational options for women, thus making it possible for the young Maria, unlike females before her, to study engineering and, later, medicine. Her research at the University of Rome’s psychiatric clinic led to concerns about the treatment of young children with cognitive disabilities that were housed with

the insane adults. Montessori began studying available literature on appropriate treatment of such children, and then expanded her reading to Jean Jacques Rousseau, Johann Pestalozzi, and Friedrich Froebel. While continuing her work with the institutionalized adults, Montessori began to experiment with teaching materials and methods for the children. At one point, she entered the eight-year-olds in the state examinations of reading and writing and they performed as well, and even better than, children in the state schools.

Thus encouraged, Montessori engaged in still more educational experimentation while retaining her medical practice. Before long she was invited to create a day-care center in a new public housing project so that preschool-aged children would not roam free while their parents were out working. This provided her with the necessary population to try out her ideas with children of more normal intelligence, and she accepted the challenge willingly. A young woman of modest education was hired as a teacher so that Montessori could train her completely. Slowly, over time, Montessori observed the children to learn from them what materials and methods worked best. At other times, teaching decisions were made based on necessity if, for example, there were too few funds to purchase sufficient materials.

From her observations and (sometimes necessary) decisions, Montessori determined that: (1) mixed ages work best to foster pro-social interactions; (2) freedom of movement for the children as well as self-selection of activities promote democratic behaviors; (3) too few materials can be positive in that the situation can enhance sharing behaviors; (4) giving the youngest children highly structured materials and activities provides them with a sense of security and self-confidence; and (5) real tools, rather than toys, for housekeeping duties shows children that they are respected and leads to their active participation in their own families' daily activities. Based on these conclusions, Montessori created a system of teaching and learning, as well as an entrepreneurial enterprise to sell materials, that has worldwide adherents to this day. Although the system was originally created for financially disadvantaged children, its attendant expense and nontraditional approach to teaching have led to the creation of mostly private schools. Where Montessori education is found in public settings, it is generally offered only for children whose

parents choose it over the regular classrooms, and typically no higher than the primary grades, although Montessori did eventually create models for older children as well.

Teacher training schools were instituted by Montessori and now appear in many countries, although they may differ in their interpretations of her educational approach. Nevertheless, observation of most Montessori schools demonstrates more commonalities than differences. These typically include: mixed ages, usually one class for the preschool and kindergarten ages and another for the primary grades; furniture placed so that children may choose to work alone or in groups; a collection of small rugs so that children are able to work on the floor; free choice of materials, along with the ability to use them as long as desired; older children helping, and sometimes teaching, younger children; a structured approach to materials that includes specific instructions for their use and preferred ages for their introduction; and teachers who regard themselves as facilitators and guides who present materials, then step back to let the children take over as they are able. The rhythm of a day is, to some extent, decreed by the children's interests. There are few full-group sessions with the teacher in charge. Rather, children move throughout the room choosing individual or group activities while the teacher selects individuals or small groups to work with.

REGGIO EMILIA EDUCATION

Shortly after the end of World War II, a young Italian middle-school teacher by the name of Loris Malaguzzi set off on his bicycle to investigate a new school he had heard about. What he discovered was a group of mothers handwashing bricks from bombed out buildings so that they could build a preschool for their children. Nearby were horses and tanks left behind by the retreating Germans—the mothers planned to sell these to complete the building and buy supplies. They did not yet know where money would come from to pay a teacher. Impressed by their dedication and vision, Malaguzzi returned often, eventually forming a relationship with the school and others like it that emerged in the postwar years. In time, as he expanded his studies of education and psychology to include early childhood, Malaguzzi's ideas became the inspiration for methods and cur-

ricula in preschools throughout the Reggio Emilia region. Parental involvement also evolved over time so that, eventually, the preschools were funded by municipal taxes, willingly voted in by supportive citizens. As the schools grew in number and reputation, word of them reached other countries and teachers from abroad, most notably the United States, came to study their methods.

Underlying the methods, materials, and curricula used in Reggio Emilia preschools is a continuing history of research into theories and philosophies and their practical applications. Malaguzzi, as original inspiration for this approach to teaching, included in his first research a visit to the Institut Jean Jacques Rousseau in Geneva, Switzerland, where Jean Piaget researched and influenced the education of young children. Impressed by Piaget's ideas, Malaguzzi suggested a constructivist approach to education with a stronger focus on mathematics than many early childhood programs might include. As Malaguzzi and the Reggio Emilia teachers continued their studies and discussions, the curriculum evolved to include more focus on the arts, but the methodology retained its respect for children's construction of their own intellects, the primary tenet of constructivism. By the time of Malaguzzi's death in 1994, Reggio Emilia schools had attained international fame, were being adapted to the needs of preschools in other countries, had exported some of their leading master teachers to instruct preschool teachers in those countries, and were continually evolving as new research and philosophies arose.

Central to the Reggio Emilia schools' curriculum are child-initiated projects, similar to those described in the previous entry under Types of Curriculum. Teachers may observe children's interests and suggest related ideas for study, or the children may themselves propose ideas. Such projects might last a day or two or many weeks. Among the latter group was a project impressive enough to be videotaped for international distribution. In the mid-1990s a group of children decided to create an amusement park for birds. This involved building bird-size models of park components with which they were familiar such as Ferris wheels and food stands. Other projects have involved studies of their town square and neighborhoods. Documentation of the children's research is an important part of each project. As preschoolers, the children are generally

preliterate, so the arts are relied on for expression. Malaguzzi spoke of these alternate ways of communication as "the hundred languages of children." Meanwhile, the teachers also document the children's learning and progress, and continue their reading and discussions so that their ideas are continually evolving.

When exported to the United States, the so-called Reggio Approach takes on somewhat different forms because it is an approach to education that is intended to be culturally sensitive. Documentation, for example, might be more technologically oriented than that used in Reggio Emilia. Or, a school might decide to focus more on mathematics or literacy experiences. What generally remains, however, is a continual study and discussion among teachers about theory, philosophy, and research, and the best application of these in their own site. Additionally, what remains is a respect for children's self-construction of knowledge, and this leads to research projects instituted by the children themselves.

WALDORF EDUCATION

Waldorf education was first described simply as an idealistic concept, to workers in a German cigarette factory. The speaker was Rudolf Steiner (1861–1925), a philosopher, and the year was 1919, shortly after the end of World War I. Steiner's speech covered his ideas on politics, economics, and education. The owner of the factory, impressed by Steiner's ideas, invited him to start a school for the workers' children. Steiner's requirements that the school be open to children of all classes, that it provide education through the twelfth grade, and that it have a spiritual but nondenominational orientation were agreed to, and planning began immediately. The school rapidly became known throughout Europe and eventually across the world with about five hundred similar schools in existence by the end of the twentieth century.

Underlying his ideas about what schooling should be was Steiner's theory of stage development. As applied to early childhood, there is a single stage covering birth to about age six or seven when baby teeth fall out and permanent teeth emerge. In this first stage, children learn through imitation of their elders, by active experiences, and through empathy for others. They absorb everything with which they come in contact, both positive and negative. When

the second stage appears, not only do permanent teeth come in but also there emerges the etheric life force, or vital energy that defines all living beings as differentiated from the earth's mineral elements. Learning through imitation is now replaced by feeling and rhythm.

Added to his stage theory was Steiner's unique blend of eastern and western philosophy, which he called anthroposophy (from the Greek *anthropos* meaning man and *sophia* meaning wisdom.) It was his belief that anyone, even laborers in a cigarette factory, could attain wisdom and knowledge and cultivate a sense of beauty and care for others. Education to gain these attributes should begin in the early years, but that would not mean that young children should be rushed into academic pursuits. They should, in fact, be permitted to enjoy their childhood by engaging extensively in art, music, dramatic play, and stories.

Since children in the first stage learn by imitation, art projects, in which teachers lead children in copying their models, are unique in the early education world in which independent creativity is more the norm. Materials are as natural as possible and synthetics avoided. Modeling materials and crayons, for example, are made from beeswax, felt to be most appropriate in its softness to young children's hands and the most aesthetic as well. In addition to the visual arts, eurhythmy encourages aesthetic knowledge and abilities. This art form, created by Steiner, blends movement, rhythm, language, and music. Literacy training, in Waldorf education, is postponed until well into the second stage of development, to the extent that teachers tell their well-rehearsed stories to children rather than read them. Pictures are not shown so that children can create their own through imagina-

tion. Such a view, unique to early education models, demonstrates respect for the oral culture of young children and a willingness to enhance it rather than to deny it by moving quickly toward early literacy experiences. When children begin first grade, fairy tales are the focus. Second-grade children learn traditional fables, and third graders, now fairly comfortable with reading, learn Old Testament stories. It is believed that fairy tales, fables, and Old Testament stories will all appeal to children moving into the feeling mode of the second developmental stage.

Waldorf schools emphasize aesthetics, not only in the curriculum, but also in the physical layout and décor of the classroom. When possible, schools are built to specifications that include nonrectangular rooms. Instead, there are walls at varying angles to achieve a less rigid and boxed-in feel. The walls are then painted in subtle colors and interesting textures. Fabrics are hand-dyed, with yardage sometimes draped artistically and invitingly over screens or furniture for young children to use in their fantasy play. Teachers spend hours creating beautifully artistic displays of natural materials for the children's enjoyment, or drawing illustrations for stories with colored chalk on the blackboard. Even any accompanying descriptions will use a variety of colors to match. In general, Waldorf schools may be said to focus on the aesthetic and to delay the academic more than all other approaches to early education. Given the opposite thrust of today's publicly supported education, this has meant that Waldorf schools are regarded as alternative, nonmainstream, and only for families that can afford private schooling.

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WEBSITE RESOURCES

- Association for Childhood Education International (ACEI) www.acei.org
- National Association for the Education of Young Children (NAEYC) www.naeyc.org
- Organization Mondiale pour l'Education Prescolaire-United States National Committee (OMEP) www.omep-usnc.org

CHILDHOOD EDUCATION

Education in the United States is unique. The organization, content, and teaching strategies are different from other countries around the world. The unique history of the United States has been a major force in shaping the educational system. The history of elementary school dates back to colonial times where a single teacher was responsible for teaching reading, writing, and arithmetic to students ages six through fourteen.

Today elementary schools serve as the primary institution of formal education. Elementary education has come to mean a child's first formal education. Elementary schools prepare children in basic skills and knowledge areas.

The age range of students attending elementary school is from six to twelve. Traditionally, elementary schools include grades kindergarten through eight. While some schools retain this structure, a more common plan is grades one through six. In many school districts, elementary education—commonly referred to today as childhood education—is organized into levels: primary, consisting of grades kindergarten through third; intermediate, consisting of grades four, five, and six; and upper elementary, consisting of grades seven and eight. Other patterns may include grades seven and eight, and often six and nine are move into middle or junior high schools. Grades six through twelve are often linked to secondary education where students have several teachers and move from class to class.

Elementary school teachers must be knowledgeable in their content area, must have the ability to communicate, motivate, and inspire, and understand the academic and emotional needs of their students. Teachers should be organized, patient, and creative. They should be able to recognize and respond to students' individual and cultural needs by using various strategies that allow them to achieve at higher levels.

Elementary teachers play an important role in the

development of children. The early learning experiences children have can shape their views of themselves and their world and can affect their later successes or failures in school, work, and personal lives.

Most elementary school teachers instruct one class of children in several academic subject areas. These include instruction in reading, language arts, mathematics, social studies, science, health, physical education, and the arts. Because proficiency in reading is the key to academic success, nearly all elementary schools devote a great deal of time to reading instruction. Mathematics instruction is next in time allotment followed by social studies and science. The United States is often compared unfavorably to other countries in respect to learner proficiency in science and math, which has prompted increased emphasis on these subject areas in the elementary school.

Assessment in the elementary school is integrated with instruction. Teachers use classroom assessments to improve student learning. Effective teachers continually assess student learning and adjust their instruction based upon their findings. Assessment not only documents learning, but also enhances the learning process. Standardized testing has come to play a major role in the elementary classroom as well. The emphasis on this type of assessment has caused many changes in the elementary curriculum and instructional methods.

CURRENT ISSUES

National debate over the purpose of schooling has continued since the inception of the elementary school. This debate has resulted in a number of reforms and changes over the years. Some of these changes have left a lasting impression on elementary schooling and others have simply vanished.

There are several issues currently engaging the pub-

lic in debate. One of these issues is student performance. Student performance is seen as a failure of the educational system. This has led to numerous state and national mandates. The No Child Left Behind Act of 2001 is one such mandate. It requires each state to implement a system of accountability that identifies low-performing schools. It also requires students in grades three through eight to be assessed in reading and mathematics once a year. Many feel this testing has caused measurement-driven instruction where tests determine what is taught, how it is taught, and even what is learned and the manner of such learning.

Immigration in the United States has long been an issue in elementary education since its inception. Immigration patterns shifted greatly at the beginning of the twentieth century and continue to shift as children from other countries enroll in elementary schools. Immigrant children have special needs that must be met by the elementary schools. The debate as to whether immigrant children should be taught in bilingual classes or be instructed in some form of English education has attracted much attention. Advocates of the bilingual education stress the importance of not delaying the child's education until they become proficient in the English language. Others feel that learning English is most important and that bilingual programs block or hinder that goal.

Incidence of school violence and drug use has increased in the late twentieth century. This includes the elementary schools as well. Younger students are exposed to more violence and drug use earlier in their lives. The National Educational Association provides information and tools to help administrators, teachers, and parents create safe schools. Conflict resolution, peer counseling, and character education have become part of the elementary education curriculum. Early intervention at the elementary level seems to have the most impact for students. Programs provide learners with life skills that will help them avoid involvement with drugs, bullying, and violence.

Homelessness and poverty are also issues of importance at the elementary school level. Poor and homeless children are more likely to experience difficulties in school. Many of these students require transportation from their shelter and this can often take up to an hour of commuting each way. These students also do not have the home advantages that other students may have. Such things as a place to do their homework, school supplies, and a good meal

may not be a part of their lives. Education and training for teachers and administrators seems to be the most effective strategy for working with homeless students. Communication with parents is essential to these students' success in school.

Inclusion of students with disabilities is another issue facing elementary schools. In order to comply with the provisions of Public Law 105-17, The Individuals with Disabilities Education Act of 1997, schools are obligated to deliver help to these learners in the regular classroom where they are enrolled. All modifications to their programs take place within the standard classroom, and often includes creating space for wheelchairs and other special equipment. Elementary schools must make their programs and facilities user-friendly for students with physical, mental, and behavioral disabilities. These issues are just a few of the current challenges faced by elementary education.

This chapter on elementary education has six entries. In the first entry, assessment is addressed. Classroom assessments, authentic assessment, and standardized tests are described.

Developmentally appropriate instruction is the topic of entry two, and attention is given to developmental learning phases, the teacher's role, and instructional strategies. In entry three, the topic describes the essential characteristics of elementary level teachers. Both personal and professional characteristics are outlined. Essential elements of the elementary school are the topic discussed in entry four. Ways in which the elementary school differs from the middle and high school are examined. The explicit, implicit, integrated, and extra curricula are the basis of discussion in entry five. The final entry of the chapter provides a look at the elementary school student and the characteristics that make them unique classroom learners.

Karen Megay-Nespoli

ASSESSMENT IN THE ELEMENTARY SCHOOL

Assessment in the elementary school has changed over the years. Assessment was once thought to come at

the end of instruction to measure only what students have learned. Today assessment is an integral part of teaching and learning. Research on teacher decisionmaking, cognitive learning, student motivation, and other topics has contributed to new understandings about assessment. For example, assessment that enhances learning is as important as assessment that documents learning (McMillan 2004).

Assessment can take many different forms; and can reflect many different kinds of achievement. Teachers direct both the assessments that determine what students learn and those that evaluate how they feel about learning. Some forms of classroom assessment of student achievement, which guide most decisions, include: asking questions, interpreting answers, reviewing homework assignments, using tests and quizzes, and judging performances. Assessment is ongoing in the classroom.

As the research below indicates, assessment used during instruction can have a profound impact on student achievement providing the information is accurate and used in an appropriate way.

CLASSROOM ASSESSMENT

Classroom assessment is more than testing or measurement. It is the collection, evaluation, and use of information to help teachers make better decisions. Classroom assessments differ from standardized tests that are administered yearly to gauge student achievement. They are most frequently used for formative purposes, to help students learn, but can also be used summatively to determine a final or report card grade.

Research on Classroom Assessment

Research reveals assessment used during instruction can have a positive impact on student learning when:

- the assessment provides specific and meaningful feedback encouraging students to regulate their own learning;
- it is used formatively to help students learn rather than summatively for a grade;
- the assessment places emphasis on understanding, thinking skills, and applying what they have learned to real world demands and challenges;
- it relies on student interaction that encourages self-regulated learners who have an awareness and willingness to explore new ideas and develop new skills;
- the assessment reflects achievement expectations that are set high for all students, yet are attainable, to maximize student confidence; and
- the modes of assessment are varied with the diversity of achievement expectations valued in most classrooms (Crooks 1988).

Developing and Using Classroom Assessments

Classroom assessments must be carefully developed to ensure that they provide accurate information. Richard Stiggins describes a set of guiding principles to follow when developing and using educational assessments meaningfully.

- *Be clear about what needs to be assessed.*
Before teachers can assess a student, they need to know the kind of knowledge, skills or performance they want students to learn. The more clearly teachers specify the learning target, the better they will be able to develop assessment tasks.
- *Clarify the specific purpose of gathering the information.*
A clear vision is needed of what the assessment will accomplish. The developer of any assessment should be able to answer the following questions: Why are you assessing? How will student learning be enhanced by the assessment? Who will use the results? How will they be used? Special emphasis should be on the student in order to integrate assessment with instruction.
- *Use a variety of methods.*
Since there are different kinds of achievement, using multiple types of assessment will enhance the their validity. Options available to classroom teachers include: multiple choice questions, true/false, matching, fill in the blank, essays, rubrics, performance assessments, and direct discussion with the student. Often several assessment techniques are needed to ascertain the extent to which a student has achieved a learning target.

- *Consider limitations when interpreting data.*

The information gathered from any assessment is only a sample of a student's achievement. Assessments cannot possibly reproduce everything students need to learn. Teachers must also consider problems that arise from the test, from the testing environment, or from the individual student (Stiggins 2001).

Decisionmaking

Teacher decisionmaking plays an important part in the assessment process. Both teaching and learning require teachers to continuously gather information and make decisions. Research estimates that teachers spend one third to one half of their time in assessment-related activities (Stiggins and Conklin 1992).

Decisions are made before, during, and after instruction. Assessment is involved in each stage of the instruction process. Preinstructional assessment allows teachers to determine what students should know, understand, and be able to do at the end of a unit.

Assessment instruments should be developed before instruction in order to guide instruction. This is often referred to as the "backward design" (Wiggins 1998). Working backwards allows teachers to focus upon the outcomes and specify the evidence needed to document student learning. This provides integration between assessment and instruction.

Once the evidence has been specified, the teacher can begin to plan the instruction. During the lesson or learning activities teachers are once again involved in assessing information, which is used to monitor learning, check for progress and diagnose learning problems.

After instruction, assessment provides information for grading students, evaluating teaching, and evaluating curricula and school programs. Assessment is integrally related to all aspects of teacher decisionmaking and instruction (McMillan 2004).

Recent Changes in Classroom Assessment

One of the most important changes in classroom assessment is the emphasis on authenticity (Wiggins 1998). Authentic assessments challenge students to use multiple methods to solve authentic problems. Authentic Assessment:

- places emphasis on metacognition and self-evaluation;
- provides meaningful performance tasks;
- specifies clear standards and criteria for excellence;
- produces quality products and performances;
- emphasizes learning that transfers; and
- fosters positive interaction between assessor and assessee (Burke 1999: xxi).

Alternative assessments are sometimes referred to as authentic assessments. However, these terms should not be used interchangeably. Alternative assessment usually means in opposition to traditional testing methods such as standardized achievement tests, multiple choice, matching, completion, and true/false formats. Alternative assessments include authentic assessments, performance assessments, journals, demonstrations, portfolios, and other forms of assessment that demonstrate more directly what the student has learned.

Another important change has been to involve students in all aspects of assessment from helping to develop assessment exercises to peer and self-evaluation. Engaging students in these activities helps students understand the evaluation process and how their own performance is appraised.

No single assessment tool alone can produce the quality of information necessary to make an accurate judgment of a student's knowledge and understanding. What is needed is a balanced approach that includes traditional, portfolio, and performance assessments. When these assessments are administered appropriately and are used in credible ways for decisionmaking they will provide a more accurate portrait of the individual learner (Burke 1999).

Standardized Tests

In recent years, standardized testing has grown in popularity largely due to the No Child Left Behind law. This law emphasizes literacy and math, and has imposed testing for children starting in the third grade as a means of raising academic achievement. Standardized test results serve as a source of evidence people use to measure educational progress. These tests summarize large amounts of information in numerical form that

allows easy comparisons of students, schools, districts, states, and countries.

Most standardized tests present a snapshot view of a learner's capabilities. These tests probe low-level kinds of mental processes. Many school districts place excessive emphasis on standardized test scores and teachers are under great pressure to "teach to the test."

In the elementary school these tests pose particular problems for young students from ethnic and cultural minorities. Standardized tests discriminate against minority learners because these learners do not have the same experiences or background that other learners may have. Students' individual needs and learning styles are often neglected in this movement to standardize curriculum. In addition, students' test scores are being used to make important decisions about a student's future—such as being retained in the same grade.

Student Portfolios

A portfolio is a carefully selected collection of student evidence that shows growth over time. Portfolios allow students to look objectively at their work and reflect on their learning. Students analyze their strengths and weaknesses and set appropriate goals. Various types of portfolios are used at the elementary level; these include writing, best work, unit, themed, and standards-based. Samples of student work are collected over time, across media, and for a variety of purposes.

Student portfolios have several advantages. Portfolios serve as a basis for discussion between the teacher and the student. Portfolios provide a place to reflect on learning. Without this element of reflection a portfolio is just a collection of a student's work. Portfolios allow students to set goals for themselves or goals for improvement to challenge themselves. Portfolios allow students to make connections between old information and new. Last, portfolios allow students to make decisions as to what pieces to include in their portfolio. Portfolios can provide insight into areas that may be overlooked, such as learners' interests, persistence, motivation, and self-concept. When used properly they can provide a rich array of information that helps teachers make solid judgments about an individual learner's performance.

Grades

Grades communicate the results of evaluation. They are of interest to students, parents, employers, and college admission officers. A commonly used system in the United States awards students letter grades. A grade of A indicates excellence, a grade of C indicates average, and a letter grade of F indicates failure.

The worth of a letter grade system should be judged on how well it communicates the results of evaluation. Critics of letter grades claim that they do not provide enough information to the learner. The letter grade may reflect an average of the information collected. It may reflect not only academic work, but behavior, work habits, and effort as well. Grades can suffer if the student is not well behaved. Many feel that letter grades should be replaced by extensive written comments (Armstrong, Henson, and Savage 2001). Some feel that written evaluations can communicate areas of strength and weakness better than a letter grade, but the reality is that it is no more valuable than the letter grade.

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DEVELOPMENTALLY APPROPRIATE INSTRUCTION

Developmentally appropriate instruction involves the "whole child" and addresses four components of learning: knowledge, skills, dispositions, and feelings (Bredekamp 1987). The basic premise is that the child constructs his or her own knowledge through interactions with the social and physical environment. Children are viewed as intrinsically motivated and self-directed to explore, experiment, and make sense of their experiences (Kostelnik 1993).

A key to this approach is to make learning meaningful for each child so that it reflects their age and individual needs. A strong emphasis is placed on learning to think critically, work cooperatively, and solve problems (Novick 1996).

Curriculum in the developmentally appropriate classroom includes: a broad range of content ar-

eas across disciplines, concentration on key concepts, and tools of inquiry used in various fields. Children conduct experiments, write, perform, collect and analyze data, solve mathematical problems, and learn to use tools that are used by the experts. Curriculum builds upon what students already know and should be able to do by consolidating learning and it encourages the acquisition of new concepts and skills.

TEACHER'S ROLE

Teacher's knowledge of child development and learning, used with knowledge of content and understanding about individual students' strengths, weaknesses, needs, interests, and experiences, are used to create the curriculum and learning environment.

The teacher's role varies from one who guides, observes, and poses problems, to facilitating learning and extending activities. Teachers make it a priority to know each child as a unique individual, to create an intellectually stimulating environment, and to foster collaboration among children. Teachers listen and acknowledge children's feelings and frustrations in order to guide children to resolve conflicts and solve their own problems. Therefore, teachers strive to find a balance between student-initiated learning and teacher support and guidance (Kostelnik, Soderman, and Whiren 1993).

DEVELOPMENTAL LEARNING PHASES

Classroom experiences and activities are organized around developmental learning phases. While children grow at different rates they usually go through specific learning phases. These phases are not solely based upon age but reflect the individuality of the child. Within the elementary school setting there are three specific phases: the early learning phase, the emerging learning phase, and the proficient learning phase.

Early Learning Phase

Early learners are approximately four to six years of age. At this time children begin to separate from adults and develop their independence. They learn to share, play, and work with other children, they look to adults for guidance rather than constant direction, and use materials and ideas with minimum

frustration. During this phase reading and other academic subjects are taught when it is appropriate.

Emerging Learning Phase

Emerging learners are approximately five to eight years old. During this phase they begin to develop skills necessary for future learning. Reading, writing, computation, problem solving, and communication skills are taught. The focus is on what they as learners already know and on moving them forward to new concepts.

Proficient Learning Phase

Proficient learners are approximately seven to ten years old. At this phase the learners become more responsible for their own learning. Learners are able to evaluate themselves and identify areas of strength and weakness. They move toward becoming self-directed learners.

In all of these phases success is the key ingredient. Learning goals are reached in steps. Children become more interested in learning when it builds on success. When they master a learning goal, they feel successful and eager to set a new learning goal (National Association for the Education of Young Children 1996).

INSTRUCTIONAL STRATEGIES

A developmentally appropriate approach to teaching and learning focuses on the individual and requires different learning strategies. Skilled teachers can use a number of instructional strategies to encourage different kinds of growth for their learners. Further, using a variety of instructional strategies helps teachers differentiate instruction and pushes students toward their learning potential. Several types of instructional strategies are discussed below.

Integrated Curriculum

Integrated curriculum connects the full range of subjects in the school's curriculum: reading, math, language arts, social studies, science, art, music, and physical education.

One technique for integrating curricula is a thematic approach. A central theme helps students to meet the learning goals in all areas. Once a theme has been identified, every aspect of the curriculum is organized

around it. Motivation is increased because learning relates to the children's lives and interests (National Association for the Education of Young Children 1996).

Varied Instructional Strategies

This strategy encourages the teacher to use a variety of teaching methods and approaches to support and enhance learning. By providing a wide variety of ways to learn, children with various learning styles are more able to succeed. Some examples include whole language, skill instruction, independent learning activities, "hands-on" science, manipulative mathematics, cooperative learning, units of instruction, projects, learning centers, and other activities.

Flexible Grouping

Flexible grouping enables children to interact with children of different ages, backgrounds, personalities, interests, and abilities. These groups reflect the realities of everyday living. Children can be grouped by skill level, interests, developmental phase, or learning style. Types of grouping can include: problem solving, interest, cooperative learning, peer tutoring, skill or instructional needs, and reinforcement. Flexible groups allow teachers to group students to improve the learning and social emotional growth of children (Espinosa 1992).

Learning Centers

Learning centers allow students to visit independent stations set up throughout the classroom. At each station the children engage in some learning activity. Children can explore and practice skills. There are opportunities for hands-on learning, real-life problem solving, and open-ended activities. Learning centers reflect the goal of active learning. They offer the opportunity for children to be responsible for their own learning; this responsibility is the foundation of lifelong learning (Stone 1995).

Balanced Teacher-Directed and Child-Initiated Activities

Developmentally appropriate instruction encourages a mixture of teacher-directed and child-directed activities. Teacher-directed learning involves the teacher as a facilitator or guide of learning rather than only a

deliverer of information. The teacher often models learning strategies and gives guided instruction. Child-directed learning allows the child to assume some responsibility for learning. The role of the child becomes one of self-initiation and direction rather than a passive recipient of knowledge.

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ESSENTIAL CHARACTERISTICS OF ELEMENTARY LEVEL TEACHERS

The role and responsibilities of elementary school teachers have changed with the years. Teachers have been conventionally viewed as dispensers of knowledge and academic skills, but teachers in the twenty-first century are viewed as facilitators or managers of information. Teachers have become intellectual leaders who create learning opportunities for students to demonstrate acquired knowledge and skills (Solomon and Firetag 2002).

Teachers have a powerful and lasting influence on students. Teachers directly affect how students learn, what they learn, and how much they learn. Student achievement has been linked to teacher effectiveness. Effective teachers exhibit common characteristics, which will be reviewed and discussed below in two sections. First, personal characteristics will be presented, followed by professional characteristics.

PERSONAL CHARACTERISTICS

Caring

Caring can be defined as bringing out the best in students through encouragement. Caring includes such qualities as trust, honesty, and patience. Teacher attributes that demonstrate caring include listening, understanding, empathy, gentleness, warmth, knowledge of students as unique individuals, and genuine love of children (Johnson 1997).

Listening

Successful teachers are good listeners. The act of listening involves paying close attention to and under-

standing what the student is saying. Listening encourages trust, honesty, and humility. Listening carefully to what students say shows students that teachers care about them as unique individuals. Children want to be nurtured, they value teachers who are kind, gentle, and encouraging, and achieve more when teachers are good listeners.

Understanding and Knowledge

Effective, caring teachers understand and know their students. Teachers know each child individually, understanding their likes and dislikes, personality traits, and personal situations that may affect their behavior and academic performance. In addition, teachers understand their students' academic strengths and weaknesses, learning styles, and educational needs. Teachers respect each student's right to confidentiality and prevent situations in which students lose respect in front of their peers. Many teachers are willing to talk about their own personal lives and experiences while maintaining appropriate teacher-student roles. Caring teachers know and understand the whole child and are perceived as being more effective by students (Thomas and Montomery 1998).

Empathy

The ability to recognize emotions and to identify with the feelings and thoughts of another describes empathy. Empathic teachers are able to understand others' points of view, perspectives, and feelings. Empathy legitimizes the teacher as a person and encourages a teacher-student relationship that enhances student learning.

Equity and Respect

Equity and respect have been identified as important characteristics of effective teachers. Effective teachers practice gender, racial, and ethnic fairness, they avoid using sarcasm, and prevent students from situations that may embarrass them in front of their peers. Other examples include understanding the facts before deciding on discipline, not holding the entire class responsible for the actions of a few students, and offering all students the opportunities to participate and to succeed (National Association of Secondary School Principals 1997).

Social Interactions with Students

Social interactions between teachers and students contribute to student learning and achievement. Interacting with students socially also increases self-esteem by fostering feelings of belonging to the class and the school. Teachers often attend school-sponsored activities such as musical productions, concerts, and sporting events. This demonstrates interest in students' lives beyond the classroom. Opportunities to socialize allow a teacher to make positive, caring connections with students. Teachers behave in a friendly and personal manner, are willing to share jokes, and demonstrate a good sense of humor. Information gathered at these social activities helps teachers to individualize and successfully challenge students.

Teacher Enthusiasm and Motivation

A teacher's enthusiasm for learning, teaching, and subject matter has been shown to encourage student achievement. High levels of motivation in teachers in the primary grades related to high levels of achievement in students (Darling-Hammond 2001). Teachers can bring out the best in their students by encouraging them to take responsibility for their own learning, setting higher standards, assigning challenging coursework, and providing reinforcement.

Attitude Toward Teaching

Teachers who exude positive attitudes about life and teaching are more successful. They believe all students can learn. They believe they must know their students and their subject. They must provide differentiated instruction or employ a multitude of strategies to reach their students. The teacher establishes positive attitudes and perceptions about learning, which helps the learner to feel comfortable, increases self-concept, interest in subject matter, and desire to learn more. This is a particularly important characteristic for elementary school teachers to have, as the desire to learn is necessary in the latter grades.

PROFESSIONAL CHARACTERISTICS

Content Knowledge

Strong content knowledge has been identified as an essential element for successful teaching. Subject matter knowledge positively affects teaching perfor-

mance. Teachers with subject matter knowledge are better able to teach beyond the textbook material, involve students in student-directed activities, and engage in meaningful discussions. A strong content background helps teachers in planning and organizing units of study and lessons that are well sequenced and interactive. Students perform better when their teachers have a strong subject area concentration.

Teacher Attitudes

Most educators are convinced that teacher attitudes play an important part in the teaching process. Attitudes have a direct effect on behavior and determine how we view ourselves and interact with others. Teachers must acknowledge their own feelings in order to understand and sympathize with their students' feelings. An attitude toward subject matter is also important. Teachers who are enthusiastic about their subject will motivate their learners. In addition, teachers' attitudes toward children, peers, and parents are vital. A teacher's attitude toward and expectation of students is a powerful influence on whether a student learns. Attitudes toward peers and parents can affect professional success. Keeping a positive and open attitude toward parents, teachers, and administrators will help teachers to feel more successful.

Teacher Experience

Teachers develop from novices to masters at different rates, taking from five to eight years to master the craft of teaching. The ability to apply knowledge, to be able to improvise, to be flexible and adaptable indicate a teacher's expertise. Teachers with more experience demonstrate better planning skills, use numerous teaching strategies, and differentiate learning activities. Experienced teachers know and understand students' learning needs, styles, skills, and interests better than novice teachers. Teaching experience has up to 30 percent beneficial effect on student academic performance.

Practical Knowledge

Personal practical knowledge includes understanding of teachers' beliefs, insights, and habits that enable them to do their job. Teachers use this knowledge to solve problems, resolve conflicts, and simplify the complexity of their work.

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ESSENTIAL ELEMENTS OF ELEMENTARY SCHOOLS

A school is an important social institution. Schools are organized to promote student growth and development. Schools play many roles and have several responsibilities associated with these roles.

Schools are responsible for transmitting specialized academic knowledge to learners. The amount of available knowledge is vast and teaching time is limited. Elementary teachers build the foundation of a child's knowledge upon which to build later.

One function of the school is to prepare students for the world of work. In the elementary grades students are exposed to different areas of study and topics. Through exposure and experience students realize interests in certain areas. They develop varying levels of expertise that later help them in seeking career options.

Schools foster social and group relationships. Learners acquire socially appropriate patterns of behavior. In the early elementary grades they learn to share, take turns, work and play with peers in addition to other skills. Later, they learn about being a part of a larger group, the school, by participating in school events, sports, and clubs. This helps learners to assimilate into the work place and other larger organizations.

Furthermore, schools transmit certain values, beliefs, and norms that are broadly supported in society. Teachers struggle to respect learners' different family and cultural backgrounds, while transmitting certain common perspectives to all students.

ESSENTIAL ELEMENTS

Philosophical Foundations

Philosophy provides educators with a framework for organizing schools and classrooms. It helps to answer questions such as what are schools for, what subjects should be taught, how students should learn, and what methods and materials should be used.

An elementary school program aims to educate and nurture learners. The programs philosophy reflects the intellectual development and personal needs of the young learner. It reflects a set of shared beliefs

and includes a commitment to: educating the whole child, providing a variety of learning experiences, ensuring all students achieve at higher levels, providing a nurturing and caring environment for learners, and fostering partnerships with families and communities.

Organization

Elementary schools are organized to promote academic excellence and support personal development. In most cases elementary schools house grades kindergarten through grade six. Class size is kept small in order for each student to receive individual and personal attention. One teacher is responsible for the education of a group of common students and classes are structured to create close relationships between students and teachers. In addition, elementary schools provide supportive services for their students such as guidance counselors, social workers, and health professionals. Special services are also provided for students who qualify; these may include teachers who work with learners who have emotional or physical handicaps, reading and math specialists, and teachers who work with gifted and talented learners.

At the elementary level parents are encouraged to become involved in a variety of school activities. Studies have shown that parent's participation in school activities helps their child's achievement (Cameron and Lee 1997).

Programs

Elementary educational programs are challenging, rigorous, and comprehensive. This is achieved by having an up-to-date written curriculum to guide teachers in all of the content areas. Furthermore, the educational program provides a set of learning skills that are common across grade levels and content areas. These learning skills are taught and reinforced in each grade and subject area. Performance expectations are also important. These performance expectations are explicit and are developmentally appropriate for the students. Last, educational programs need an assessment component where diagnostic assessments are administered on a regular basis to monitor the learning of each student.

Instruction

Classroom instruction is appropriate to the need and characteristics of elementary learners. Knowledgeable teachers use instructional techniques that attend to the unique individual needs and developmental characteristics of elementary learners. Teachers have a deep understanding of the content areas they teach, differing learning approaches and strategies. They involve students in the learning process and encourage them to make choices, question, and experience things in order to learn and grow. Technology is used to enhance learning and activities are varied to hold student interest. Teachers use flexible grouping, peer tutoring, and cooperative learning groups to enhance social and interpersonal skills. Teachers work closely with parents and school personnel to help students acquire the necessary subject matter. Classroom assessment is used to measure individual student growth as well as to monitor and plan instruction. Teachers strive to match instruction to the students varied learning styles.

Leadership

The last essential element of elementary schools is leadership. Strong educational leadership encourages and facilitates growth. Elementary school leaders know and understand the needs, developmental characteristics of elementary students, and the subject matter that student are exposed to. Leaders understand appropriate instructional approaches and diverse teaching strategies used with elementary level students. Strong educational leaders have high expectations for students and teachers. They involve faculty in decisions that affect students. Leaders encourage teachers to take risks, to question, and to try new approaches. They encourage teachers to continue as learners themselves and to grow professionally. In addition, they facilitate and cooperate in planning and providing professional training and staff development opportunities.

All of these elements of elementary schools are essential to ensure that all students achieve at high levels and develop as unique individuals.

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THE ELEMENTARY SCHOOL CURRICULUM

Curriculum can be defined as what a student should know and be able to do. A curriculum specifies by what point students should have mastered specific skills and performances. This is known as the scope and sequence of the curriculum. The United States does not have a national curriculum. Control of the schools is reserved to the states. It is at the state level where curriculum is developed. The states, in turn, give local school districts some control over what is taught and how it is taught.

Elementary education provides the basics: reading, writing, arithmetic, natural and social sciences, health, physical education, art, and music. Elementary education also helps to build a sense of national identity and citizenship in children.

ELEMENTARY SCHOOL CURRICULUM TYPES

The Explicit Curriculum

The explicit curriculum is the curriculum found in curriculum guides, courses of study, textbooks, and other formal educational experiences (Vallance 1995). The explicit curriculum includes what teachers are expected to teach, what learners are expected to learn, and what schools are held accountable for. The explicit curriculum at the elementary level is organized around broad fields such as language arts, social studies, mathematics, and the sciences.

Language arts include reading, writing, listening, speaking, spelling, and penmanship. It is one of the largest curriculum areas and one that requires a great deal of time in the early elementary grades. The teaching of reading is crucial to a child's success in school. Time is spent reading and discussing stories and other forms of children's literature. Controversy surrounds the teaching of reading. Some school districts and teachers prefer the phonics approach while others prefer the whole language approach. Yet, other districts use a combined approach using both phonics and whole language approaches.

The second largest part of the elementary curricu-

lum is mathematics. Students must learn basic computational skills. These include addition, subtraction, multiplication, and division, measuring, and graphics. A current focus includes solving word problems and written explanations addressing the steps taken to solve the word problem.

Social studies curriculum presents an integration of selected elements of geography, history, economics, government, and sociology. It is presented sequentially, gradually leading children from their family and neighborhood to the larger world. Critics of the social studies curriculum argue that American students lack knowledge and understanding about other nations and cultures. They feel the curriculum focuses mainly on the United States. Other critics feel that geography should be taught as a separate discipline since American students perform poorly on geographic questions.

Science in the elementary curriculum consists of integrated concepts from the natural and physical sciences, such as biology, chemistry, physics, and earth science. Science in the elementary classroom focuses on hands-on experiments, field trips, and demonstrations. Students are taught to use the scientific inquiry method where they hypothesize, observe, record data, and draw conclusions. Critics feel that the science curriculum lacks strong foundational knowledge in the sciences. Supporters defend the scientific inquiry method and stress the importance for students to develop a sense of science as a process rather than only being able to recall specific scientific facts.

The elementary level curriculum also includes music, art, games, safety and health issues, as well as physical education and fitness, which involve strengthening students' motor skills. Computer-assisted instruction, computer literacy, and other technologies used in the elementary level classroom will also shape future curriculum as we move forward as a high-tech nation.

Integrated Curriculum

Integrated curriculum is popular at the elementary level. Integrated curriculum refers to relating concepts and skills across disciplines (Carter and Mason 1997). Teachers might have students read about a social studies topic, relate it to the events in a historical novel, and then write a historical journal entry based on what

they have learned. These activities integrate social studies and English language arts. Integrating curriculum increases the relevance of content by making real life connections with the topic, which in turn helps students to remember material. Opponents of integration believe that deeper understanding of the topic is sacrificed in the integration process.

Implicit Curriculum

Another dimension of the elementary curriculum is called the implicit curriculum or hidden curriculum. This represents its unstated and unintended aspects. It is reflected in the ways teachers present the content, the kinds of routines that are established, the climate of the classroom, and unstated values and priorities that shape the school day (McCaslin and Good 1996).

The implicit curriculum is just as important as the explicit curriculum. Students learn to raise their hands rather than shout out an answer, they learn that making a mistake is part of the learning process, and they learn how to get along with their classmates. Teachers' actions will help students to learn these things. Students also learn which academic subjects teachers value by the emphasis they place on the subject. These messages reflect the implicit curriculum and are an important part of the students' total learning experience.

Extra-curriculum

Extra-curriculum refers to the learning experiences that extend beyond the student's formal studies. In other words, activities that do not earn academic credit—such as sports, clubs, and musical theater—are considered extra-curriculum. Research has shown that schools with well-developed extra-curricular activities are more effective. Furthermore, students who participated in extra-curricula activities tend to be motivated and get better grades than those students who do not (Coladarcci and Cobb 1995). Extra-curricular activities offer valuable experiences for students to learn and grow. They also satisfied a student's need to be a part of a group and feel successful outside the classroom.

Moral and Character Education

Two areas that have recently been added to the elementary curriculum are moral and character edu-

cation. Moral education is value free, emphasizing the development of a student's moral reasoning. Through the use of moral dilemmas and classroom discussions students are taught to problem solve and bring about changes in the way they think with respect to moral issues.

Character education emphasizes moral values such as trust, honesty and citizenship and how these values can be translated into behaviors. Instruction in character education emphasizes the study of values and the practice of them in and out of school. Respect, courtesy, and compassion are amongst the traits that are taught to students (Jacobson 1999).

The Standard Movement

The standard movement of the later 1990s has also impacted the elementary curriculum. This movement has required more standardized testing to determine whether students are performing at specified levels in key academic areas of reading and mathematics. Opponents argue that this movement encourages teachers to teach for the test rather than teaching for the development of the whole child. Others argue that it is necessary to ensure that all children master the basics of reading, mathematics, and writing that will help them succeed in the future. The standards movement has had a definite impact on the elementary curriculum. According to teachers, the curriculum is more demanding and teacher expectations are higher.

Karen Megay-Nespoli

UNDERSTANDING THE ELEMENTARY SCHOOL STUDENT

Diverse best describes the population in American elementary schools in the twenty-first century. According to the United States Department of Education (National Center for Educational Statistics 2001), one in every three students nationwide is identified as a minority. In several major cities this rate is even higher.

Diversity within the elementary school includes students of different ethnicities, races, religions, lan-

guages, and exceptionalities. Diversity is both a strength and a challenge to educators. While diversity brings richness to the classroom, it also requires instruction that is responsive to the backgrounds of these individual learners.

To plan an effective school program, elementary teachers must gather accurate information about minority learners, be committed to the idea that all students can learn, acknowledge their own perspectives about these learners, and be able to accommodate and modify teaching practices. The more a teacher respects and responds to student differences, the greater the chance of success for these students at school. Success builds student confidence, which leads to positive attitudes toward school and teachers.

DIFFERENT FORMS OF STUDENT DIVERSITY

Racial Diversity and Gender

Race refers to a group of people who share certain physical traits such as body structure, facial features, and skin color. Members of a certain race have common experiences and perceptions of society that impact the classroom. Achievement is influenced by social and economic factors. In the United States a parent's education level and socioeconomic level are predictors of educational success. Racial minorities often do not have these advantages. Teachers seek the best methods and materials to help these students. Communication and parent participation also help to improve achievement for racial minorities.

Gender Diversity

Gender differences in educational experiences are also found to be common. Teachers give more attention to boys. In general teachers expect less from girls. This is particularly true in the areas of math and science. Other biases have been found in textbooks, educational activities, and classroom interactions. Early experiences with gender bias can hinder girls' achievement later in middle and high school. Teachers need to address gender bias and ensure all students have an equal chance to succeed (Sadker, Sadker, and Klein 1991).

Ethnic Diversity

Ethnicity is often referred to as a group of people classed according to common traits, customs, values, and traditions. Each ethnic group has its own inherited cultural beliefs, norms, and attitudes. Not all ethnic groups believe in the value of an education. The teacher's task is to provide developmentally appropriate instructions that value ethnic diversity and foster achievement.

Language Diversity

Language is the key to learning and communicating. Students who do not understand or respond appropriately will not be academically successful. Language barriers are one of the greatest obstacles facing elementary classrooms. Success in school depends upon an individual's command of the English language. Personal income increases with education; it is therefore essential for students to master the English language. Teachers must prepare students to be competent in standard English. Since many families immigrate to the United States with young school-aged children this task falls to the elementary teacher.

Religious Diversity

Students who attend public schools practice many different religions. The place of religion in schools is regulated by the Constitution. Teachers must respect the separation of church and state. Teachers cannot teach religion or ridicule other religions. Religious diversity allows for respect and tolerance of other types of religion. In the elementary grades there are numerous holiday celebrations. These calendar holidays present the opportunity to learn how others celebrate as well as the similarities and differences within religions.

Exceptional Learners

Exceptional learners are those who have special or unusual characteristics. Learners who have disabilities or are gifted are considered exceptional learners. Exceptional learners are now included in the regular classroom and receive services during the school day. The speech therapist, occupational therapist, social worker, school nurse, school psy-

chologist, or the resource room specialist provide services.

Physical Diversity

Learners with general or physical health impairments have some sort of physical or medical problem that can affect their performance in the classroom. This can include students who have had surgery or have broken an arm or leg. Each situation will vary and modifications can be made based upon the individual situations.

Visually Impaired and Blind Learners

Learners with visual impairments or blindness can learn well in the regular classroom with modifications. Often these learners are provided special equipment such as braille writers, computers, and tape recorders to help them learn. Readers may be provided for these students.

Hearing Impaired and Deaf Learners

Hearing-impaired and deaf learners have difficulty producing speech and acquiring language skills due to their hearing loss. Some students can read lips and teachers need to face them when speaking. Other students use hearing aids and others have the teacher use a small microphone to enhance the sound. Teachers use more visuals such as an overhead projector, computer, or PowerPoint presentations with hearing impaired and deaf students. In some cases an interpreter who uses sign language is assigned to work with them.

Orthopedically Impaired Learners

Orthopedically impaired learners have limited physical abilities. These children may use wheelchairs or

other special equipment. Safety is a concern and teachers may need to make provisions for the special equipment.

Emotionally Disturbed Learners

The behavior patterns of these learners interfere with their development as individuals and their ability to form and maintain relationships. These learners have low self-esteem, have trouble making decisions, and often feel isolated from their peers. Teachers try to build on success by setting clear expectations and helping them to understand that their behavior has consequences.

Learning Disabilities

Students with learning disabilities have difficulty using mental processes required to understand written or oral language. Learners have trouble reading, writing, listening, and spelling, or with basic mathematics operations. Teachers help these students learn organizational skills and highlight key ideas for them. These children work best in smaller groups, and with highly structured lessons.

Gifted Learners

Gifted learners have outstanding intellectual or creative abilities that need to be nurtured by special programs. Learners are identified by multiple criteria such as test scores, writing samples, and teacher recommendations. Programs for gifted fall into two categories: enrichment or acceleration. Enrichment programs allow students to explore various topics in depth. Acceleration allows students to move through material at a quicker pace by allowing them to skip grades or take courses with older learners.

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MIDDLE LEVEL EDUCATION

The middle school movement has been declared “one of the largest and most comprehensive efforts at educational reorganization in the history of American public schooling” (George and Oldaker 1985, 1). In 1989 the Carnegie Task Force on Education of Young Adolescents noted, “Young adolescents face significant turning points” (p. 8). While *Turning Points* seemed to set the stage for continuing discussion and debate on the nature and character of middle level education, the call for middle level reform was not new. Earlier reports called for the need for something different to happen in the way school was organized. For example, the Committee on College Entrance Requirements, commissioned by the National Education Association (1899), wrote that “the most necessary and far-reaching reforms in secondary education must begin in the seventh and eighth grades in our schools” (p. 659). This commission noted that the seventh grade was a “natural turning point in the pupil’s life, as the age of adolescence demands new methods and [a] wiser direction” (p. 659).

While much of the debate focused on whether or not to keep eight years of elementary schooling and four years of secondary schooling, high dropout rates were blamed on the difficult transition from elementary to high school. The first response to the problematic eight-then-four-year organization of schools was the creation of the junior high. Appearing in the first decade of the twentieth century, junior highs were hailed for their ability to prevent dropouts and to prepare students for the job market. The hope was that the curriculum, as well as the students, would be invigorated by the new organizational arrangement.

Concurrent with these developments, early psychologists, like G. Stanley Hall (1904), called upon educators to address the developmental needs of their students. Hall’s studies influenced Americans to accept the fact that the field of education should be

grounded in psychology and that adolescence should be given scientific study. The development of this new science of individual differences provided another justification for the development of the junior high. In 1918, the Commission on the Reorganization of Secondary Education recommended the new organization in its annual report:

We, therefore, recommend a reorganization of the school system whereby the first six years shall be devoted to elementary education designed to meet the needs of pupils approximately 6 to 12 years of age, and the second six years to secondary education designed to meet the needs of pupils approximately 12 to 18 years of age. The six years devoted to secondary education may well be divided into two periods that may be designated as the junior and senior high periods. (pp. 12–13)

What is important to remember from this junior high period is the recognition that schools were to understand and respond to the particular nature of the adolescent while attempting to continue the influence of the home. According to George and Alexander (1993), “The junior high emerged, originally, as an attempt to satisfy the call for a richer curriculum than the elementary school was able to offer, and a more personal atmosphere than the high school was able to develop” (p. 285).

By the early 1960s much of the literature on the junior high noted that such schools had turned into “miniature high schools” (Johnson et al. 1994). Junior highs had become “pale imitations of senior high schools” (Grooms 1967). Aided by additional sociological and psychological research during the 1950s and 1960s, educators judged the junior high school organization as inappropriate for young adolescents who are psychologically, socially, emotionally, intellectually, and physically at a very different place than adolescents.

Eventually, in the early 1960s the call to reform the junior high had evolved into a call for the creation of the middle school. This call was furthered with the publication in 1965 of W. M. Alexander's *The Junior High: A Changing View*; in 1966 with D. H. Eichhorn's *The Middle School*; and in 1969 with W. M. Alexander's *The Emergent Middle School*.

In 1965, the National Education Association (NEA) defined middle school as: "The school which stands academically between elementary and high school, is housed separately (ideally in a building especially designed for this purpose), and offers at least three years of schooling beginning with either grade 5 or 6" (p. 5). Later the National Middle School Association (NMSA) would define the middle schools as consisting of grades "mainly 6–8 . . . but also 5–8, 5–7, and 7–8; based on developmental needs (social and academic) of young adolescents, organized by interdisciplinary teams, with flexible organizational structures, using varied learning and teaching approaches" (1995, 1).

SOLIDIFYING THE MIDDLE SCHOOL CONCEPT: THE NEED FOR A CLEAR RATIONALE

In 1969 the Association for Supervision and Curriculum Development (ASCD) established the Council on the Emerging Adolescent Learner. In 1974, after much work by both formal and informal working groups, the Executive Council of ASCD appointed a group and charged them with "developing a paper for the Association identifying the rationale and significance of the American middle school and stressing the kinds of programs appropriate for emerging adolescent learners" (ASCD 1975, v). In 1975, ASCD published *The Middle School We Need* that reasserted the need to develop schools around the needs and characteristics of young adolescents. Recommendations such as team teaching, individualized instruction, and flexible scheduling were suggested.

In 1973, the National Middle School Association (NMSA) was created. In 1982 (revised in 1995) *This We Believe: Developmentally Responsive Middle Schools* was published. This position paper sets forth ten essential elements or characteristics of the middle school. They include:

- (1) Educators knowledgeable about and committed to young adolescents,
- (2) a balanced curriculum based on the needs of young adolescents,
- (3) a range of organizational arrangements (flexible structures),
- (4) varied instructional strategies,
- (5) a full exploratory program,
- (6) comprehensive counseling and advising,
- (7) continuous progress for students,
- (8) evaluation procedures compatible with the nature of young adolescents,
- (9) cooperative planning, and
- (10) a positive school climate. (NMSA 1995, 11)

In 1985 the National Association of Secondary School Principals (NASSP) Council on Middle Level Education released *An Agenda for Excellence in Middle Level Education*. Focused on twelve areas (e.g., climate and culture, student development, school organization, curriculum, learning and instruction, transition, client-centeredness), this document aimed at building school programs responsive to the needs of students. In order for middle schools to achieve academic productivity, middle schools should be organized:

- (1) So that decisions are made at the lowest possible level in the organization . . . by teams of teachers working closely together with students and other school personnel.
- (2) So that the effects of size are minimized, large schools should be broken into smaller units or families. Schools should be organized around teaching teams that plan and work with clearly identified groups of students, thereby assuring that every student is well known by a group of teachers.
- (3) With a class schedule that allows the greatest amount of uninterrupted learning time for teams of teachers working with groups of students. Teachers should be given maximum control over how instructional time is allocated and used.
- (4) With advisory groups of teachers and parents participating in important decisions about building goals, budget priorities, and school climate. (excerpted from NASSP 1985, 10–11)

In 1989, when the Carnegie Task Force on Education of Young Adolescents issued *Turning Points: Preparing American Youth for the 21st Century*, this document noted that:

A volatile mismatch exists between the organization and curriculum of middle grade schools and the intellectual and emotional needs of young adolescents. Caught in a vortex of changing demands, the engagement of many youth in learning diminished, and their rates of alienation, substance abuse, absenteeism, and dropping out of school begin to rise. (pp. 8–9)

In short, *Turning Points* challenged middle schools to be places where close, trusting relationships with adults and peers create a climate for personal growth and intellectual development. To accomplish this, middle schools were to:

- (1) create small learning communities for learning,
- (2) teach a core academic curriculum,
- (3) empower teachers and administrators,
- (4) staff middle schools with teachers who are expert at teaching young adolescents,
- (5) improve academic performance of students,
- (6) re-engage families in the educational process, and
- (7) connect schools with communities.

According to *Turning Points*, these seven components would work collectively to ensure the success of all students. Unfortunately, many middle level practitioners and researchers did not understand the ecological nature of this reform initiative. Many schools began changing the structure of their programs, adding such activities such as interdisciplinary teams and advisories. Few schools adopted the reform as a total package. While it seems common sense to assume that schools would respond to the needs of their students and create developmentally appropriate learning environments, it is evident from the history of middle level reform that schools are slow to change. But Carnegie did offer grants to twenty-seven states that submitted competitive plans for middle school improvement. These grants helped to turn the recommendations of *Turning Points* into reality—bridging the gap between theory and practice.

In 2000 the Carnegie Corporation of New York issued a report, *Turning Points 2000: Educating Adolescents for the 21st Century* (Jackson and Davis 2000). Ten years after the release of the original *Turning Points* (1989), this report asserted as core values the beliefs that: (1) the primary purpose of middle grades education is to promote young adolescents' intellectual development; (2) adolescents' intellectual, ethical, and social development requires strong, supportive relationships; and (3) successful middle grades schools are equitable with high outcomes for every student. Jackson and Davis, authors of the report, noted that the most important changes from the original report included: (1) ensuring the success of every student; (2) a greater emphasis on teaching and learning; (3) a curriculum grounded in academic standards; and (4) families and communities becoming inextricably linked to the work of schools. While the original *Turning Points* provided a framework for middle grades educational reform, *Turning Points 2000* provided valuable guidance to practitioners interested in implementing the model.

Finally, in 2003 the National Middle School Association released the third version of its position statement, *This We Believe*, now subtitled "successful schools for young adolescents." The new publication placed a strong emphasis on the courageous and collaborative leadership needed to ensure the successful implementation of the middle school concept. It also emphasized the holistic nature of the reform initiative since most middle level practitioners and scholars had been adopting and implementing, as needed, only parts and pieces of the reform model. Additionally, *Research and Resources in Support of This We Believe* (Anfara et al. 2003) was written to provide practitioners and policymakers with the research that supports the reform.

What should be obvious from this discussion is that a very consistent collection of ideas about what constitutes a good middle school emerged. The number of middle schools increased. According to the Department of Education Statistics (1995), there were 9,573 middle level schools by 1993/1994. This amounts to approximately three middle schools for every junior high in existence. The most recent figures (Bradley and Manzo 2000) document the existence of 16,000 middle schools and

only 2,000 junior highs. But all too often the change was in name only and many middle schools continue to operate as “transitional schools” (Manning 1993).

THE REFORM PENDULUM SWINGS AGAIN

Middle schools are on the defensive. Recent articles dealing with middle level education have been replete with accounts of what is happening, especially in reference to curriculum and student achievement. Called the “weak link” in the K–12 education chain, *Education Week* published two articles attacking middle schools. One was titled “A Crack in the Middle” (Killion and Hirsh 1998) and the other was “Muddle in the Middle” (Bradley 1998). Tucker and Coddling (cited in Bradley 1998) referred to middle schools as “the wasteland of our primary and secondary educational landscape.” In short, the middle school model has come under attack for supplanting academic rigor with a focus on students’ social, emotional, and physical needs.

Most of the recent attacks cite evidence from studies like the Third International Mathematics and Science Study (TIMSS) and the National Assessment of Educational Progress (NAEP). TIMSS is the largest international comparative study of educational achievement to date—with approximately 500,000 students from forty-one countries. Students from three distinct target populations are assessed: (1) nine-year-olds (typically grades three or four), (2) thirteen-year-olds (in grades seven and eight), and (3) students enrolled in the final year of secondary schooling. Focusing on the thirteen-year-old population, the international comparison suggests a general improvement in U.S. science scores from a 1991 assessment that placed American middle school students below average. But middle school performance in mathematics remains below the international average. In mathematics, twenty countries outperformed the United States, thirteen performed similarly, and seven scored below the United States. In science, nine countries outperformed the United States, sixteen performed similarly, and fifteen scored below.

Among the findings drawn from the Third International Mathematics and Science Study are the following:

- (1) Eighth-grade mathematics classes in the United States are not as advanced and not as focused as those in Japan and Germany.
- (2) Topics taught in U.S. eighth-grade mathematics classrooms are at a seventh-grade level by international standards.
- (3) The content of U.S. mathematics classes requires less high-level thought than classes in Germany and Japan.
- (4) U.S. mathematics teachers’ typical goal is to teach students how to do something, while Japanese teachers’ goal is to help their students understand mathematical concepts. (excerpted from Mid-Atlantic Eisenhower Consortium for Mathematics and Science Education 1997)

Reviewing the TIMSS results, Silver (1998) found “a pervasive and intolerable mediocrity in mathematics teaching and learning in the middle grades.” (p. 1). Likewise, newspaper and magazines were filled with reports of middle level students stagnating in seventh and eighth grades, leaving them unprepared and unmotivated for more rigorous high school classes.

While TIMSS was designed primarily to make international comparisons, the National Assessment of Educational Progress (NAEP) was designed specifically to measure longitudinal achievement and related demographic trends in U.S. education. NAEP data reveal that U.S. students have improved in math and reading achievement from the 1970s to the present, though science achievement remains at a level similar to that found in the early 1970s. Achievement trends for thirteen-year-olds differ by performance quartile. Most of the achievement gains in reading have occurred within the upper quartile, though some of the gains are in the middle two quartiles. The performance gap between white and black students in math, reading, and science, after narrowing in the 1980s, has widened slightly across the 1990s.

Additional evidence that alarms middle school advocates comes from a variety of sources. In 1998 Johnston and Williamson investigated four communities to identify the concerns and issues of parents regarding middle schools. The analysis of 1,900 surveys, 400 interviews, and 350 exit interviews revealed that parents were concerned with: (1) the pervasive

anonymity in middle schools; (2) the format and content of the curriculum; (3) the lack of rigor and challenge of the curriculum; and (4) poor instructional techniques.

Some evidence points to the lack of focused preparation for middle level teachers and administrators. Bradley (1998) wrote, "A majority of middle-grades teachers, meanwhile, were prepared either to teach elementary or high school. Most were licensed to teach elementary school, leaving them unprepared to handle more complex academic content" (p. 40). Other reasons for the current attack on middle level schools stem from the current emphasis on accountability and its reliance on high-stakes testing as the measure of student performance.

Vincent A. Anfara Jr.

MIDDLE LEVEL CURRICULUM AND ASSESSMENT

Middle level curriculum is what students learn or could learn through their involvement in formal schooling, including classes, clubs, advisory programs and other guidance, student government, and athletic programs. Middle level curriculum within classes or courses will be the focus of this entry. Middle level assessment provides opportunities for students to demonstrate how well they have learned; for example, paper-and-pencil tests, projects, portfolios, journals, presentations, debates, performances, and so on. Middle level instruction, the focus of the next entry, is how students learn and can include, among other methods, lecture, demonstrations, hands-on activities, and discussions.

Curriculum appropriate for young adolescents relates to their needs, interests, and concerns. It draws on rigorous academic standards for what students should know and be able to do; challenges students to stretch their boundaries (and their wings) by, for example, requiring the use of higher order thinking; and it integrates content across subject area lines to blur the distinctions between the real world and school. Appropriate curriculum also provides opportunities for young adolescents to explore their own

talents and preferences, contribute to their communities, and try out various pursuits that may drive their learning and activities for a lifetime (Jackson and Davis 2000; National Middle School Association 2003). Assessment strategies for young adolescents are continuous, providing frequent feedback to students and teachers that can be used to support student learning; appropriate to the learning task, yielding relevant evidence of students' progress toward objectives for their learning; and varied, including both informal and formal strategies and ensuring that neither teachers nor students rely too much on any single type of measure as evidence of student progress or the lack thereof.

In theory and in practice, middle level curriculum, assessment, and instruction are intertwined, each affecting the others. The notion of "backward design" provides a concise framework for the discussion of curriculum, assessment, and instruction and their relationships to one another. Backward design highlights decisions regarding what to teach (the curriculum); how to tell if the students have learned (assessment); and what methods (instructional strategies) will engage students deeply in learning and prepare them to demonstrate what they have learned (Wiggins and McTighe 1998). This framework is called backward design as an acknowledgement that, traditionally, educators have often begun their planning with instruction, targeting favorite activities, then matched the activities to curriculum, often defined as the textbook, before considering assessment. Backward design, in contrast, starts with a focus on what students should know and be able to do, then choosing assessment methods that will allow students to provide evidence of what they have learned, and finally tailoring instruction to prepare students to provide that evidence of their knowledge and skills.

MIDDLE LEVEL CURRICULUM

History

Backward design begins with curriculum, deciding what to teach. Decisions about what to teach in the middle grades (grades 5–8) have been and continue to be fraught with controversy. Since the idea of middle level education was introduced in the late nineteenth century (see the entry, "The History of the Middle School"), educators, politicians, community members,

parents, and students have often disagreed about the purpose of schooling for this age group; for example, preparation for college, preparation for the work force, preparation for active citizenship, and/or preparation to become caring and ethical adults. Those disagreements about purpose have led to disagreements about what should be taught at this level.

Higher education leaders like Charles Eliot, then Harvard president, provided the initial push for a distinct school for young adolescents. In his 1888 speech to the National Education Association (NEA), Eliot argued for earlier introduction of college preparatory courses in hopes of better preparing youth for the university and lowering the age of college entry. Bolstered by the reports of several NEA and U.S. Bureau of Education committees recommending increased academic rigor in grades 7–9 (e.g., Committee of Ten on Secondary School Studies 1893; Committee on Economy of Time in Education 1913), the junior high school's curriculum mirrored that of high schools, with the inclusion of biology, foreign language, algebra, and physics. Prior to the advent of the junior high, the upper elementary grades (6–8) typically represented a rehash of information and skills highlighted in the early years of school, dominated by the “rote and repeat” strategy for mastering the basics of reading, writing, and arithmetic (Davis 1996).

The introduction of the Carnegie unit early in the twentieth century only strengthened the junior high school's mimicry of high school courses and schedules. To gain acceptance into college, students had to accumulate Carnegie units in certain subjects, with each unit requiring seat time of approximately forty–sixty minutes per day, five days a week, for one school year. To accumulate the fourteen Carnegie units typically required for admission to college, students enrolled in academic courses like English, mathematics, foreign languages, history, and science over the course of four years (Tyack and Tobin 1993). Those four years of Carnegie unit accumulation included (and still include) ninth grade, which had been part of most middle level schools up until the last twenty years or so. Carnegie units and their focus on college preparation have thus driven the subject-specific focus of middle level classes for nearly a century, and the forty–sixty-minute blocks of time those units demand provide an inflexible structure for class schedules that determines how much content teachers and students can address each day in each subject.

Though college preparation has been a dominant force, preparation for the work force and active citizenship have also been critical in the evolution of the middle level curriculum. The high dropout and low retention rates among early adolescents led educators like Calvin Woodward to criticize the public school system for its apparent over-attention to college preparation at the expense of those students who might pursue other avenues to working adulthood. According to education historian Lawrence Cremin, Woodward argued that educators should put the “whole boy in the school” by offering manual or vocational training in addition to the liberal arts (1961, 28). As foreshadowing of middle school proponents' calls for relevant curriculum and exploration, Woodward felt that demonstrating the connections between academics and application would help young people maintain their interest in school, make better career choices, and take their places in a better-educated work force as adults.

In the first half of the twentieth century, public secondary schools faced a rapid rise in student enrollments, with immigrants from many countries adding to the numbers. Public schools seemed an obvious means for introducing American culture and citizenship to new residents, and the inclusion of citizenship education became another part of the junior high school's curriculum. For some junior high schools, beginning in the 1930s, the progressive movement also helped shift the curriculum toward preparation for citizenship in a democracy. The progressives, many of them educators, advocated a “core” or general education curriculum that dissolved subject boundaries to focus on problems that crossed subject lines, fostered understanding and competence, and structured the school day around longer blocks of time intended to free up teachers and students from the tyranny of bells ringing every forty-five minutes to interrupt learning. According to two surveys conducted by Grace Wright (1950; 1958), by the 1950s, about 10 percent of junior high schools reported using a core curriculum and almost half structured the day into longer blocks of time. However, the Soviet Union's launching of the space satellite Sputnik in 1957, coupled with McCarthyism and the Cold War in the 1950s, helped sound the death knell for many progressive education initiatives, including those that had touched the junior high school. The “space race,” which began in earnest after Sputnik, engendered a

renewed focus on academics, particularly mathematics and science, which left little room for dissolving subjects or scheduling boundaries.

As the nation turned “back to the basics” in middle level curriculum in the early 1960s, many former junior high school advocates (e.g., Van Til, Vars, and Lounsbury 1961) began to express their discontent with the educational structure they had helped to develop. In his memorandum to school boards across the country, James Bryant Conant (1960) of Harvard came down particularly hard on the junior high’s tendency to imitate the high school, arguing that junior highs had no sound educational reasons for offering graduation ceremonies and interscholastic (between schools) athletic programs. Gordon Vars (1965) attacked the junior high school’s intense focus on specific disciplines, formal and didactic instruction, and an undue emphasis on college preparation. He worried that the developmental characteristics of young adolescents were trampled beneath the weight of heavier textbooks and high school rituals that resulted in “too much, too soon” (p. 188). As educators pointed out the mismatches between the characteristics of young adolescents and the kinds of experiences those students were having in public schools, new proposals for educating young adolescents began to emerge. The 1970s and 1980s saw the birth and rapid growth of a “middle school movement,” that has as one of its hallmarks an approach to curriculum that explicitly ties content to students.

Today

Though controversy over curriculum in middle grades schools still rages, two current sets of recommendations for improving middle grades schools—each grounded in research, theory, and practice—form the basis for this discussion of today’s middle level curriculum. In its most recent vision statement, *This We Believe: Successful Schools for Young Adolescents* (2003), the National Middle School Association argues that curriculum for young adolescents should be relevant, challenging, integrative, and exploratory. In *Turning Points 2000: Educating Adolescents in the 21st Century* (2000), Anthony Jackson and Gayle Andrews Davis recommend that curriculum be grounded in standards for what students should know and be able to do, relevant to the concerns of adolescents, and based on

how students learn best. Both documents thus call on middle level educators to make decisions about what to teach based on the unique needs, concerns, and interests of the young adolescents they teach.

Turning Points 2000 contends that the entire curriculum—including what is addressed, how it is addressed, and in what sequence—should be organized around important concepts and questions. In the landmark 1999 publication of the National Research Council, *How People Learn: Brain, Mind, Experience, and School* (Bransford, Brown, and Cocking 1999), the research described demonstrates that experts within any given field organize their knowledge not around lists of facts or formulas but around concepts, that is big ideas, with the implication that school curriculum should also be organized around concepts to facilitate student learning.

States and professional associations for educators typically organize academic content standards for what students should know and be able to do by discipline or subject—standards for language arts, standards for mathematics, etc. Nearly every state has its own unique content standards for four disciplines—language arts, mathematics, science, and social studies—at all grade levels K–12. Some states organize their content standards explicitly around concepts; others tend to rely more on lists of facts, figures, and skills, with the concepts to be implied or inferred from the lists.

Both *Turning Points 2000* and *This We Believe* call for integrating curriculum across disciplines and around key concepts, while ensuring that teachers and students maintain rigor by drawing upon the relevant academic content standards. For schools that understand the power of big ideas for deepening curriculum study within a discipline, using that power to show connections across disciplines is a logical step. Concepts and essential questions that cross disciplines can be the driving force of integrated curriculum design (Jacobs 1989; Texas Education Agency 1999). Essential questions and concepts help students remember facts and topics, because these overarching ideas give students a hook for organizing the seemingly trivial into meaningful patterns (Erickson 1998; Tomlinson 1998). Young adolescents are ready to seek out patterns; to make connections as they try to figure out the world around them and their place in it. In fact, James Beane (1997) maintains that the most powerful sources for concepts and questions are young adolescents’ concerns about

themselves and social issues. He points out that personal and social concerns are likely to frame the way young people already organize their knowledge and experiences, making curriculum structured around those concerns more relevant to students.

Challenging curriculum gives students choices and responsibility related to their own learning. Those choices are particularly important in motivating adolescents who are at risk of school failure (Baker 1996; Benard 1993). Exploratory curriculum provides meaningful experiences, grounded in real life, that allow young adolescents to try out different ideas, hobbies, and academic and career pursuits. Examples include music, art, drama, journalism, and job-shadowing opportunities in which a student spends a day with an adult professional engaged in an occupation of interest to the student.

Service learning provides opportunities to make middle level curriculum simultaneously relevant, challenging, integrative, and exploratory. According to Elizabeth Pate (2002), service learning is a curriculum model that intentionally connects students' academic knowledge and skills to real-life problems through service to address a community need. Particularly when done democratically, giving students a voice in making decisions about what community need to address and how, service learning allows students to "live" the curriculum by using the knowledge and skills gained in their coursework to identify and tackle a problem, learn from the community they serve, and reflect on their learning and its impact on themselves and the community.

MIDDLE LEVEL ASSESSMENT

Assessment is the process of gathering information or evidence regarding student learning. Historically, assessment of learning in middle level schools has mimicked assessment in high school, which in turn mimics the college level: paper-and-pencil tests, quizzes, and research papers have dominated for decades. To this more formal, paper-driven repertoire, teachers have added informal assessments (e.g., observations, students' verbal responses to questions), though generally students' grades have relied heavily on the results of the more formal assessments. Given the focus, described above, on college preparation as a purpose for middle level education, the weight given to these traditional assessments in middle level

schools seems fitting. For most of the twentieth century, young adolescent students, like their older counterparts, were required to demonstrate how well they have learned through their performance on paper-and-pencil tests or examinations.

In today's middle level schools, those examinations frequently include standardized tests, often state or federally mandated. Students' scores on those tests increasingly have an impact on student retention and placement in classes (e.g., remedial, advanced) and, under the provisions of the No Child Left Behind Act of 2002, on funding and other resources provided to middle level schools.

Both *This We Believe* (NMSA 2003) and *Turning Points 2000* (Jackson and Davis 2000) argue that assessment should be designed to provide ongoing, useful feedback, to both middle level students and their teachers, on what students have learned. This feedback should be used to improve teaching and learning, not just audit performance, and should be garnered in a variety of ways, including but not limited to informal gauges of student progress like class discussions and observations; traditional tests and quizzes that provide snapshots of student learning; interviews, conferences, and surveys that gather evidence by asking students to provide it directly; and performance tasks and projects that are more complex and authentic to the extent that those more complicated assessments draw on real life and real problems as engines or drivers of the work.

In addition to being varied and ongoing, effective assessment connects directly to curriculum and instruction, meshing perfectly with what students are to learn. To create those connections, backward design's first stage involves deciding what is to be learned (curriculum) and its second stage requires determining what evidence will best demonstrate that learning (assessment). Appropriate evidence is thus tied directly to curriculum—what students should learn. According to Grant Wiggins and Jay McTighe in their 1998 book, *Understanding by Design*, curriculum can be divided into three categories or levels: knowledge and skills worth "enduring understanding," those that merit mastery, and those with which students should just become familiar (p. 10). Dividing curriculum into those three categories can help prioritize the content to be addressed within any particular unit of study and determine the assessment methods that make the most sense given the kinds of knowledge and skills students

will need to demonstrate as proof of their learning. For example, students can exhibit their familiarity with names, dates, formulas, and other facts worth being familiar with, on traditional tests and quizzes and through informal assessment methods like their responses to teacher questions. Though tests and quizzes can still be helpful, performance tasks and projects that are more open-ended and complex can be particularly revealing means for students to demonstrate their mastery of a framework, like the elements of a story, and their enduring understanding of a concept like hubris.

P. Gayle Andrews

MIDDLE LEVEL INSTRUCTION

Middle level instruction is *how* students learn and includes all the activities, lessons, readings, discussions, and other strategies for gaining knowledge and skills in which students engage. Middle level curriculum is *what* students learn or could learn, and assessment allows students to show *how well* they have learned that content. Instruction, then, is the means for moving students from point A (curriculum) to point B (assessment).

Effective middle level instruction must connect to the curriculum, which should be relevant to young adolescents, integrative (crossing subject areas), exploratory, and based on academic standards for what students should know and be able to do. Instruction must connect to the varied and ongoing assessments that will allow students to demonstrate their learning; and to the students: their learning needs, interests, skills, and cultural and experiential backgrounds (Jackson and Davis 2000; National Middle School Association 2003). Successful instruction must connect simultaneously to these three different aspects of teaching and learning, making instructional decisions complicated and multifaceted. In middle level schools, the multiple dimensions of young adolescent development add to the complexity of instructional decisions. Methods that work well with younger students do not necessarily translate to young adolescents in the midst of rapid cognitive, social, emotional, and moral changes (see the entry on the young adolescent for more on development).

Curriculum, assessment, and instruction are

closely interrelated, with each affecting the others. Instructional decisions are the final stage of backward design that, unlike traditional practice among many educators, calls for starting with curriculum, choosing assessments designed to let students demonstrate what they have learned, and then designing instruction that will prepare students to demonstrate their learning (Wiggins and McTighe 1998). This entry will focus on instruction, the final stage of backward design.

HISTORY OF MIDDLE LEVEL INSTRUCTION

Like middle level curriculum and assessment, middle level instruction mirrored the high school and college levels for most of the twentieth century. Characterized by direct instruction, lecture, and worksheets, the instructional strategies in use in many middle level classrooms reflected the high school's imitation of a college classroom. The junior high school—the level of schooling that resulted from many different, and often conflicting, calls for better educating of young adolescents for college, the workforce, and active citizenship—was truly a *junior* high school, a scaled-down version of the high school's adherence to subject area disciplines, teacher-centered instruction, and rites of passage to adulthood like graduation for ninth graders, highly competitive interscholastic sports, and even proms.

The Impact of the Child Study Movement on Middle Level Instruction

The early advocates for the junior high school did not envision miniature high schools as the result of their call for a distinct level of schooling for youth ages ten to fifteen. Thomas Briggs (1920) and Leonard Koos (1927) instead drew upon the philosophies typical of G. Stanley Hall's child study movement in their descriptions of the ideal junior high. Hall, a renowned psychologist, introduced the notion of child study, that is, scientific study of the child through careful observation at various stages of development. In an effort that helped launch all the research since on young adolescents, Hall studied the characteristics and behavior of youth in New York City. In his groundbreaking description of that research, *Adolescence* (1904), Hall described early adolescence,

marked by the onset of puberty, as a time of rapid and significant changes in cognitive, emotional, social, and moral development. Hall and his colleagues also established the connections between child study and instructional decisions by arguing that if educators had a better understanding of child development, like that occurring during early adolescence, they would be better able to support that development (Webb, Metha, and Jordan 2000).

According to Stephen Gross (2002), modern conceptions of effective middle level instruction can, in fact, be traced directly to the child study movement. In the 1920s, Thomas Briggs and Leonard Koos envisioned a middle level school characterized by instruction designed to recognize and accommodate the unique needs of young adolescents. In the 1940s, with the number of junior high schools rapidly increasing, William Gruhn and Harl Douglass called for instruction fitted to the needs, interests, and capacities of the child in their landmark text, *The Modern Junior High School* (1947). William Van Til, Gordon Vars, and John Lounsbury echoed Gruhn and Douglass in their 1961 plea for instructional strategies tailored to young adolescents' individual needs, a plea that highlighted the difference between the vision of junior high instruction that both Briggs and Koos had outlined and the reality of teaching in the miniature high schools that junior highs became. In his 1965 analysis of the junior high school, middle school advocate Gordon Vars particularly decried the junior high's heavy reliance on formal and didactic instruction.

Lev Vygotsky's book, *Mind in Society* (1978), also echoes the child study movement and forms part of the foundation for current thinking about effective middle level instruction. Vygotsky introduced the idea that every child has a distinctive zone of proximal development (ZPD), a zone between what the child can do currently and what the child would be able to do with the support of a professional educator. To help students cross the zone from where they are to where they could be, Vygotsky recommended "scaffolding." Like the scaffolds builders use to support buildings while under construction or renovation, Vygotsky argued that educators should provide, and then gradually remove, scaffolds, or supports, to help students attain their respective zones of proximal development.

Carol Ann Tomlinson, professor at the University of Virginia, is today's heir apparent to the child study movement. In her work on differentiated instruction

(described in more detail below), Tomlinson describes the necessity of knowing students well enough to make decisions about what instructional methods will best support their learning. In a direct connection to Vygotsky, Tomlinson (2003) says that middle level teachers should provide scaffolding to support individual students in doing their best work.

The Impact of Tracking and Teacher Preparation on Middle Level Instruction

In addition to the child study movement, two other important legacies have affected the nature of middle level instruction: the placement of students into different classes or "tracks" based on ability, and the teacher preparation experienced by most middle level teachers.

Like John Dewey and other progressives in favor of child-centered schooling, Leonard Koos (1927) argued for equalizing educational opportunity in the junior high school by adjusting to individual differences. The focus on children's differences shifted as the junior high school's actual instructional placement practices selected out those students considered capable of going on to college and those thought to be on direct routes to the workplace. The junior high used criteria—including test scores, teacher recommendations, and grades—for sorting and sifting students that generally reflected society's patterns of discrimination by class (Perlstein and Tobin 1988). Once students were placed on a track of courses (e.g., vocational, remedial, college preparatory), they typically did not switch tracks, nor, as a result, destinies. The progressive educators who had wanted schools to pay attention to individual differences and each child's learning trajectory were dismayed by the actual practice of ignoring that trajectory in favor of keeping individual children grouped, and in effect trapped, on the same track with the same destination.

The historic pattern of teacher preparation for middle level educators partially explains the tendency of those educators to teach to the mean, using the same strategies for all students without regard to individuality. Most educators in junior highs (and in today's middle schools) have not been specially prepared to teach young adolescents (McEwin, Dickinson, and Jenkins 2003; Scales and McEwin 1994). In fact, many junior high and middle school teachers have been trained in the secondary

education tradition in which subject-area disciplines and the “open students’ heads and pour” models of instruction reign supreme. In the shadow studies (i.e., shadowing students over the course of a school day) supported by the National Association for Secondary School Principals, John Lounsbury and his colleagues confirmed that many middle grades students experienced classroom teaching that made them passive recipients of content (Lounsbury and Clark 1990; Lounsbury and Johnston 1988). Without specialized training highlighting the connections between instructional decisions and early adolescents’ individual needs and capabilities, the tailored and interactive instructional practices that Briggs and Koos envisioned in junior high schools were crushed by the weight of the high school’s traditions (Davis 1996).

Middle Level Instruction Today

A recent survey of middle level schools across the country (McEwin, Dickinson, and Jenkins 2003) revealed that young adolescents still experience more direct instruction than any other type (85–88 percent across fifth through eighth grades), and that most middle level students experience tracking in one or more subjects (78 percent). This reality contrasts sharply with current recommendations for instructional practice in middle grades classroom.

In the National Middle School Association’s (NMSA) most recent vision statement, *This We Believe: Successful Schools for Young Adolescents* (2003), the association calls for multiple teaching and learning approaches that respond to the diversity of young adolescents. NMSA contends that middle level students should be actively engaged in their learning, including participating in decisions about what content to address and how. In an echo of Vygotsky’s zone of proximal development, the 2003 edition of *This We Believe* also argues that teachers should work together to design instruction that challenges students appropriately, and those instructional activities should group students in varying ways: for example, sometimes by student interest, sometimes by learning style, and sometimes by ability, though the latter should not represent a permanent group placement as tracking practices often have.

Carnegie Corporation of New York’s influential

report, *Turning Points 2000: Educating Adolescents in the 21st Century* (Jackson and Davis 2000), sounds remarkably similar to NMSA’s 2003 vision in its recommendations for effective middle level instruction and also reflects the child study movement’s focus on the unique needs of individual learners. In drawing on the best of research and practice during the 1990s, *Turning Points 2000* advocates instruction that ensures the success of every student in meeting high standards. With regard to instruction, the authors recommend that teachers:

- Meet students where they are, since people learn best by constructing new knowledge and skills based on what they already believe and understand (Bransford, Brown, and Cocking 1999; Brooks and Brooks 1993; Zemelman, Daniels, and Hyde 1998);
- Center classrooms on students because they also learn best when instructional activities reflect who they are (e.g., cultural and personal background and experiences) and allow them to exercise some control over their learning (Tomlinson 1999; Wiggins and McTighe 1998; Neumann, Marks, and Gamoran 1995);
- Engage and support students in challenging work since people learn best when they have to stretch to succeed (Vygotsky 1978);
- Diagnose and then attend to students’ varied learning needs by purposefully differentiating content (curriculum), process (instruction), and product (assessment) (Tomlinson 1999);
- Stress experiential learning that makes authentic connections to the students’ personal and social concerns and to the world beyond the classroom (Zemelman, Daniels, and Hyde 1998; Newmann, Marks, and Gamoran 1995); and
- Encourage students to work collaboratively and to reflect on what they have learned (Zemelman, Daniels, and Hyde 1998).

Taken together, the recommendations for organizing middle level instruction in *This We Believe* and *Turning Points 2000* reflect a century’s worth of efforts to improve middle level teaching and learning. That century included the child study movement; the work of developmentalists who based their research on the child study movement like Jean Piaget, Erik Erikson, and Lev Vygotsky; and the current researcher

Jay McTighe and many others who are trying to make varied, relevant, engaging, and developmentally appropriate instruction a part of everyday life for young adolescents across the country.

P. Gayle Andrews

UNDERSTANDING THE MIDDLE SCHOOL STUDENT

Defined broadly, the middle school student is in fifth to ninth grade, typically ranging in age from nine to fifteen. While traditional research has described this stage of development as awkward, understanding the middle school student can be equally awkward and challenging. The intensity and range of changes and choices for middle school students rivals no other developmental stage, and the impact of context and student choices shape developmental trajectories into adulthood. Middle school students are learning how to be teenagers, a period of life that most view as negative or problematic. There is also a vast range for “normal” in terms of development for middle school students. While many test boundaries and struggle with developmental and contextual change, middle school students also make an important transition filled with unbridled opportunities.

A TRADITIONAL UNDERSTANDING OF MIDDLE SCHOOL STUDENTS

Early adolescence has only recently been identified as a distinct developmental stage and, therefore, it lacks a long history of research. Most human development textbooks will use middle childhood or adolescence to describe and distinguish development stages. Essentially, personal experience as a middle school student has shaped ideas about early adolescence rather than an extensive research base. Additionally, most of the scientific research that does exist has been on white middle class students, severely limiting our understanding of the influence of culture and diversity. For example, racial identity development is a concept that may be both an important influence and outcome of development in middle school. This limited attention to and lack

of specificity for middle school students or early adolescents is analogous to the difficulty in understanding the middle school student. For instance, middle school students themselves are aware of adults’ limited understanding, often feeling as if they are the only ones experiencing these developmental circumstances and that no one could possibly understand what they are going through.

The early research on this phase of development has traditionally been related to adolescence in general and characterized as storm and stress. Aside from infancy, no other phase of life is characterized by greater, more rapid, and diverse development than early adolescence. Middle school students have been called “transescents” and “bubblegummers” by researchers and “tweens” by the media. Most often the terms themselves do not distinguish this stage, instead describing it as prior to adolescence (preadolescence) or in between two stages. Peter Scales, developmental psychologist and director of the Search Institute, describes middle school students as “psychologically vulnerable, because at no other stage of individual development are they more likely to encounter and be aware of so many differences between self and others” (Scales 2003, 49). The self-consciousness at times can be debilitating, as peer comparison and acceptance, fads, and group belonging all contribute to feelings of industry or inferiority (the classic Erik Erikson stage).

This vulnerability to social competition and comparison extends to other realms of development as well. Physiologically, hormones and brain development are changing and interact with new environmental challenges. Physically, so many pubertal changes occur at different rates that middle school students struggle to accommodate and get comfortable in their own bodies. Uneven spurts of growth in weight, height, strength, lung capacity, bone structure, and sexual characteristics create a lack of coordination and a wide range of individual differences. Hormonal changes also create intense and extreme mood and disposition changes, often of varied duration. More recent research has further articulated the struggles of early adolescent females, who often struggle with more pronounced self-esteem losses, vicious competition in cliques, and assorted understandings and feelings toward menarche. Disordered eating and body image problems are also problematic. For example, developmental psychologist Janet Eccles

has demonstrated that early- or late-developing middle school students, particularly females, often undergo more peer scrutiny, are depressed, and have lower body image. Others have suggested that late-developing males also have increased risk for depression, conflict with parents, and a higher risk of being bullied. The timing of pubertal change is therefore salient for middle school students.

The impact of phenomena like peer influence and diverse individual development often introduce risk-taking and destructive behaviors such as bullying, sexual harassment, and challenges to authority. Both genders tend to be concerned about appearance and are often unprepared emotionally for emerging sexual feelings and norms. There is no set timetable for development in middle school, and patterns, sequence, and structure in terms of development are much less predictable. It is not surprising that middle school students struggle, are even obsessed with defining their own identities, as this can be very difficult to determine (e.g., role confusion) when in such a state of developmental flux.

This dual struggle looking inward (identity) and outward (industry) is compelling and often greatly influenced by context. For example, interesting transitions occur in families and schools. Inconsistent behavior and variation in mood are often a result of insecurities and a search for a burgeoning identity outside that of the familial unit. Middle school students begin to reject family rituals, crave privacy, experience increased power struggles, and question rules and authority. They prefer to deal with developmental tasks in private, and family is often rejected as the inhibiting source for the emerging independence. Conflict tends to peak (depending on timing of puberty and development of identity) during middle school years over continual day-to-day matters and wide-ranging issues. The American Psychological Association suggests it is also normal for adolescents to argue for the sake of arguing, jump to conclusions, be self-centered, and be overly dramatic. Middle school students move seamlessly between the desire to act as a child and the desire to be respected as an adult. Perhaps as a response to the increased rebellion and struggle for independence, parent involvement in schools drops considerably during the middle school years.

As the family dynamics evolve, a more abrupt ecological transition commences with the move from elementary to middle school. Several detrimental

outcomes (e.g., declines in self-esteem, declines in achievement and motivation) have been associated with the transition to middle school. Research speculates that the vulnerability of the developmental changes combined with considerable ecological change prompts declines in academics and social upheaval. While these declines can be mitigated by appropriate intervention and support, inevitable contextual change includes more students, more adult authority figures, and increased competition. Stress is a normal outcome for many middle school students as they manage the personal and contextual transitions, and students may disengage from school if the transition is not negotiated successfully.

Alongside family and school, community factors (such as socioeconomic status and available resources) can influence the development of middle school students. For example, religious institutions and the media can significantly impact outcomes such as substance abuse and expressions of sexuality. Middle school students seemingly flood malls, movie theaters, and community arenas to try out newfound independence and explore intimacy with peers and opposite-sex relationships.

The reciprocal, interrelated, and recurring interactions with development in self and ecology all contribute to a complex and dynamic understanding of the middle school student. While puberty and the environment contribute to the personal and social meanings of development, there is more to understanding the middle school student beyond storm and stress and the challenges associated with early adolescent development. The American Psychological Association suggests that most adolescents succeed in school, are attached to their family, and emerge from their teen years without experiencing serious problems. Through development, increased autonomy, and an adult understanding of the middle school student, they have an opportunity to progress through developmental tasks in healthy ways that shape optimal pathways into adulthood.

A CONTEMPORARY UNDERSTANDING OF MIDDLE SCHOOL STUDENTS

While the ebb and flow of development is a great concern to parents and adults who raise and work with middle school students, great opportunity also

dwells in this stage of development. The turbulent change is a state of reorganization, and independence is both natural and important. Peter Scales suggests that middle school students are “psychologically resilient . . . tend to be optimistic and have a generally positive view of their personal future” (2003, 49). Others have emphasized the more sophisticated sense of humor (e.g., sarcasm) that emerges with abstract thinking abilities. Depending on the situation, developing cognitive skills enhance students’ abilities to reason and allow them to think about the future, evaluate alternatives, take perspectives of others, and set personal goals. Meta-cognition, or the ability to think about one’s thinking, becomes more frequent among middle school students. Middle school students do not necessarily think about adult topics, but the way they think tends to be more adultlike. Middle school students can also be idealistic, showing consideration for feelings and rights of others (although this is not always applied to one’s self). This ability and energy leads to middle school students’ social concerns and energy invested in causes they identify as important. While some middle school students may not exhibit abstract thinking consistently, these developing capabilities move many students beyond egocentric thinking into conventional forms of reasoning.

Curiosity, insight, interpretation, and proposition all stimulate future idealistic thinking and moral dilemmas that are influential to an emerging identity. Career development and the construction of what students might become and who they would like to grow to be is more salient. In fact, many middle school students make their first career-related decision when making curriculum decisions for middle and high school. Positive career development in middle school includes exploration of self and careers, with a movement toward crystallizing potential career paths.

Like a traditional understanding, a contemporary view of puberty also recognizes the magnitude of adjustment in almost every realm of development. While the previous mean age of menarche was nearly thirteen in 1973, today girls show some signs of puberty as early as age seven and pubertal development typically extends from age ten to seventeen. There is some evidence that culture impacts puberty as well, as some cultures may have accelerated physical de-

velopment and there is some evidence that African-American students tend to cope and thrive more effectively with early development.

Metabolism changes and ravenous or peculiar appetites contribute to a need for daily exercise, nutritional guidance, and an understanding about body changes. Middle school students thrive on diverse (active, peer-oriented) learning experiences, physical activity to release energy, leadership and participatory activities, development of problem solving skills, and the need to investigate intense curiosities. Research has also suggested that many middle school students are more comfortable with the vast range of developmental changes when adults help prepare them and open communication lines about the impact of concerns over appearance. The abrupt and diverse change that students encounter is not necessarily a cause for storm and stress; rather middle school student awareness, understanding, and coping abilities that are fostered by peer groups and significant adults shape the middle school experience.

The increasing importance of peer groups often is visible in same-sex cliques and the exploration of intimacy. A budding interest in intimacy is often viewed as dangerous, and understandably so due to the consequences of poor choices (e.g., pregnancy, sexually transmitted diseases), and negotiating sexuality in relationships is complicated for middle school students. Romantic relationships are characteristically short in duration and often occur in group situations. While most early adolescents are trying to understand sex, little research has demonstrated high levels of engagement in intercourse. Additionally, healthy experiences of intimacy are important and enriching. In fact, negotiating intimacy is one of the most influential psychosocial learning processes in middle school that shape adult experiences. Most of the exploration of intimacy will come in intense friendships and peer groupings. These friendships and “best friends” fluctuate often, and the intensity of these relationships creates both pain and great joy. The peer group provides a sense of belonging, acceptance, helps develop social skills, helps solve problems, and provides a sense of independence from family.

While more explicit control over behavior by parents is normal, there is evidence that middle school students benefit greatly from consistent structure

from adults. Middle school students tend to learn social and sex roles through models like parents and other significant adults. This opportunity to help influence roles through exploration, confrontation of stereotypes, and guided socialization is important. While media and friends have tremendous influence over many middle school fads and trends, parents are still the major influence for morals and lifelong goals. Middle school students still prefer adult or parent guidance with important decisions, and feelings of competence are linked to emotional closeness and acceptance from parents.

The choices that middle school students make are articulations of independence and these bring about greater responsibility for these decisions. Risk taking is a natural behavior for middle school students and these explorations help shape identity, decisionmaking skills, and realistic assessments of self and the world. Although risk taking can be detrimental to developmental pathways (e.g., alcohol/drugs, pregnancy, school failure), challenging middle school students beyond capacities in constructive pursuits with guidance contributes to and is important to healthy development. Parents and adults help middle school students understand what choices mean in relation to self and others. In turn, conversations (rather than lectures) with middle school students can be equally rewarding for adults and parents.

Along with parental guidance, the influence of context and culture can also be influential and enriching for middle school students. The emergence and appropriate implementation of the middle school concept (instead of the junior high) has been designed to meet the needs of early adolescents and provide safe opportunities to achieve developmental tasks. Emerging developmental research on resilience, competence, and developmental assets also provide instrumental assistance in understanding the middle school student. For example, a stable, positive relationship with at least one caring adult has been shown in numerous research studies to be influential on the resilience of youth. The Search Institute's forty Developmental Assets outline external (e.g., positive family communication, service to others, high expectations) and internal (e.g., school engagement, integrity, cultural competence) assets that promote healthy youth development. Additionally, Janet Eccles advocates an appropriate stage or personal environment fit, where schools,

families, and community groups provide structures that are appropriate for the developmental needs of middle school students. These types of contextual supports potentially can ameliorate—or at least moderate—any storm and stress experienced by the diverse and abrupt change in the lives of middle school students.

CONCLUSIONS ON UNDERSTANDING THE MIDDLE SCHOOL STUDENT

There is no formal rite of passage into adulthood in the United States, although early adolescence and middle school is often recognized as the starting point. Reflecting on one's own junior high or middle school experience is not often pleasant. Our own experience creates bias in how we view middle school students today and shapes our reactions to understanding middle school students. Additionally, the context of society, schools, families, and communities are distinctively different (perhaps more risky) from when most adults were in junior high.

The personal drama and roller coaster ride that middle school students experience is based on diverse, abrupt developmental and contextual changes. Middle school students progress through this stage much like a two year old who searches for independence and control. The main difference is that middle school students seem to flourish most when they are publicly treated like an adult, while privately supported and nurtured like a child.

To understand today's middle school student, emerging information about development in early adolescence, how development is shaped by context in society today, and the diversity and uniqueness of individual change and choices must be considered. In terms of understanding and negotiating the gray areas with middle school students, it is typically less productive to directly bombard them with questions starting with the word "why." Rather, engaging them in nonjudgmental, open-ended conversation often opens the door for more understanding. While most middle school students would suggest it is impossible for adults to understand them, taking time to do so is engaging and has an impact on the developmental trajectory of youth.

Patrick Akos

ESSENTIAL CHARACTERISTICS OF MIDDLE LEVEL TEACHERS

Middle level teachers have the shortest amount of time with their students yet the greatest amount of pressure to get their students ready for the more challenging secondary school curriculum. Middle level teachers meet students during one of the toughest times in their lives thereby making it one of the toughest jobs to fill. Nevertheless, people are choosing this level of schooling for their teaching careers. What is it, then, that we can identify for them as essential characteristics that the middle school teacher needs to possess in working with young adolescents?

BACKGROUND

From its very beginnings, the National Middle School Association (NMSA), in its position paper *This We Believe*, articulated a vision of middle level education starting with “Educators committed to young adolescents” (1982). Throughout three subsequent iterations of its position, NMSA continued to list educators as the top priority (1992, 1995, 2003). Supporting that vision, *Turning Points: Preparing American Youth for the 21st Century*, the groundbreaking report published by the Carnegie Council on Adolescent Development (1989), referenced educators in each one of the eight ingredients articulated for the transformation of adolescent education. For example, to create a community of learners, *Turning Points* calls for teachers to be good listeners, effective advisors, and cooperative team players (pp. 37–42). A decade later in *Turning Points 2000: Educating Adolescents in the 21st Century*, Anthony Jackson and Gayle Davis (2000) examined how to improve middle grades education. They underlined the critical importance for middle grades schools to be staffed with teachers who are expert at teaching young adolescents. The essential characteristics of middle level teachers can be understood within the following five categories.

Middle Level Teachers Understand Young Adolescent Transitions

Students in the middle school years are particularly vulnerable to swift changes in their social and emotional lives, their cognitive skills, and their physical

growth. An understanding of the transitions of young adolescents equips the middle school teacher with characteristics effective in working with them. That is, middle level teachers recognize the developmental challenges of young adolescents, they offer understanding, and they are willing to take risks and make mistakes in the process of becoming more effective in working with their middle school students. A fundamental love for students during this stage of their adolescent growth is vital. Middle school students arrive with a variety of needs that must be addressed. Adaptability and flexibility are key characteristics needed in working with young adolescents. Relevancy of curricular content to real-life situations increases middle school students’ appreciation of the discipline. This requires that middle school teachers possess a variety of teaching strategies. Finally, middle school teachers must be involved in reflective practice. In order to succeed with this age group, teachers must be willing to try things, risk failure, learn from their mistakes, and try again.

In his book entitled *Teaching Ten to Fourteen Year Olds*, Chris Stevenson (1992) offers four generalizations teachers can trust in working with young adolescents: (1) every child wants to believe in himself or herself as a successful person, (2) every youngster wants to be liked and respected, (3) every youngster wants physical exercise and freedom to move, and (4) youngsters want life to be just.

Middle Level Teachers Know Themselves

Middle school students begin to recognize that their teachers are people too—with strengths and weaknesses of their own. Self-knowledge is especially significant for the middle school teacher. Middle school students seek out their teachers for counsel, investing in them a high degree of trust in the teacher’s ability to mentor and lead them through the turbulence of this phase of human development. Once it is established that the teacher is empathic, honest, and patient, thereby meeting the fundamental emotional needs of students, students’ motivation to learn increases.

Among the personal characteristics needed in middle school teachers is a sense of humor. Not only is it important for teachers to have a sense of humor, it is important for them to realize that kids at this age are developing a sense of humor of their own.

Laughter and fun are important factors for young adolescents in the learning process. Along with this, there is a basic love of life that teachers need in order to be successful with this age group. Middle school students are exploding with energy, therefore enthusiasm, empathy, patience, honesty, creativity, and spontaneity are qualities essential in teaching at the middle level. Nancy Doda, Paul George, and C. Kenneth McEwin in "Ten Current Truths About Effective Schools" (1987) presented five "truths" about the middle school classroom teacher:

1. Effective middle level teachers do not sit down while they teach. A standing, roving teacher has more opportunity to monitor student behavior. As well, the teacher models an active involvement in the teaching and learning.
2. Effective middle level teachers work to create lessons that bring students as close to the real thing as possible. Young adolescents are concrete thinkers and need concrete symbols to help them enter into the lesson.
3. Effective middle level teachers have a sense of humor. Middle level teachers keep the affect light when faced with the choice to laugh or scream.
4. Effective middle level teachers think big but teach small. With middle school students this is an option for quality versus quantity.
5. Effective middle school teachers work to weasel their way into the hearts of the young adolescents they teach. Middle school teachers do not underestimate the value of affection in creating bonds with their students. (excerpted, p. 5)

Middle Level Teachers Form Critical Relationships

Forming critical relationships is a key to teaching at the middle level especially. Time spent observing colleagues, either informally among grade partners or formally with mentors, is crucial to the development of characteristics effective at this level. Chief among the benefits to observing one's colleagues are the additional instructional ideas gained in the process. Peer observations and team collaboration involve time, work, and a commitment from all involved.

In middle schools, critical relationships flow from colleagues to friends, from classroom neighbors to middle school team members, from a student's teach-

ers to parent and family partners, from districtwide colleagues meeting to those one meets at local and national conferences, and from on-the-job mentors to teacher preparation and staff development opportunities. Developing collegial relationships often results in friendships, which nurture and nourish a desire to grow professionally as a teacher. Good communication skills, coupled with interpersonal people skills are essential for working with the variety of people one encounters in middle school.

Among the qualities necessary in middle level teaching, the ability to collaborate and cooperate in order to meet the interactive learning style of young adolescents is essential. Middle school teachers work together to deliver a curriculum that is exploratory, integrative, challenging, and relevant. There can be no turf wars in the middle school. In the same way, successful middle school teachers must enlist family involvement in a holistic approach to curriculum, instruction, and assessment in the teaching and learning enterprise.

Middle Level Teachers Manage the Classroom Environment

Classroom management requires organization and structure, that is, being prepared with lesson plans for the school day, unit plans for the week, and long-term plans for the year. It is not enough to be well trained in teaching methods and knowledgeable about your course content, or to be particularly good at managing your classroom; teachers need to be consistent. Consistency creates a rhythm that both frees students to learn and ensures that learning is happening.

While organization and consistency are crucial to managing the middle school classroom, respect among young adolescents is built upon the foundations of discipline and control. These factors allow students to gain insight into what is appropriate for them.

M. Lee Manning and Katherine T. Bucher, in their book *Teaching in the Middle School* (2001), offer guidelines for developing a personal theory of classroom management. A middle school classroom management system should:

1. reflect young adolescent development;
2. reflect the teacher's beliefs about how classroom management should work;
3. be workable and efficient;
4. be equitable;

5. apply to all programs in the middle school curriculum; and
6. be professionally rewarding. (p. 143).

Middle Level Teachers Are Experts in Subject Content

The desirability of specialized preparation programs for teachers of young adolescents is not a new idea. Calls for such specialized preparation programs have been included in the literature for over eighty years and date back to the days of the junior high. In relation to middle schools today there is consensus regarding the appropriate nature of specialized middle level teacher preparation and the kind of licensure regulations needed. Additionally, as reflected in the performance-based National Middle School Association (NMSA)/National Council for Accreditation of Teacher Education (NCATE) middle level teacher preparation standards (NMSA 2001a), middle level educators generally agree about what middle level teachers should know and be able to do.

In defining experts for middle school classrooms, the *No Child Left Behind Act* (NCLB) of 2000 requires that states articulate certification standards for teachers serving the middle level. This comprehensive educational reform package guarantees a highly qualified teacher in every classroom. All teachers in grades 7–9 at the middle school level must have a middle level certificate in accordance with the content area they are teaching—middle level English, math, science, or social studies—or hold a secondary (usually, grades 7–12) certificate in that content area. Elementary certified teachers currently teaching in middle grades schools need to pass a Praxis test in the subject to which they are assigned. Teachers wishing to add one or more of the middle level content areas to their existing certificate may take the appropriate test. Secondary teachers may teach their certificate subject area in a middle level school. Preservice middle grades teachers are encouraged to seek certification in two of the four content areas.

SUMMARY OF ESSENTIAL MIDDLE LEVEL TEACHER CHARACTERISTICS

The agenda for college and university presidents, *To Touch the Future: Transforming the Way Teachers Are Taught*, set forth by the American Council on Educa-

tion (1999), established that the essential competencies of an effective teacher are command of subject, proper preparation in pedagogy, and high overall academic performance. Only a limited amount of research is available on the topic of characteristics essential for effective middle level teaching. Table 17.1 on the next two pages displays results of studies that cover a variety of methodologies and include a diversity of participants. In an article entitled “Preparing Teachers for the Middle Grades,” results of a study conducted by NMSA in 1981 identified seventeen characteristics associated with effective middle level teachers. In 1991 John Buckner and Frank Bickel took up the question “If You Want to Know About Effective Teaching, Why Not Ask Your Middle School Kids?” and designed a survey of twenty-seven descriptors, which they brought to middle level students for verification. Alfred Arth and his colleagues (1995) sought validation from middle level teachers and principals for the sixteen characteristics they considered distinctive of excellent middle level teachers, and published their results under the title *Middle Level Teachers: Portraits of Excellence*. Finally, in her work entitled “The Effective Middle School Teacher: Inwardly Integrated, Outwardly Connected,” Kathleen Roney (2001) identified characteristics that principals, teachers, and students say are essential in working with young adolescents. Three out of the four studies share the first fifteen characteristics listed in Table 17.1. The more recent study by Arth et al. added four characteristics, and Roney added six to top off the list at thirty-four. In short, the effective middle level teacher blends knowledge of young adolescents with knowledge of self in working with colleagues to create developmentally responsive middle level schools so that students acquire the “skills, knowledge, and personal competence . . . to be successful now and in the future” (NMSA 1995, 5).

Kathleen Roney

CSR MODELS FOR MIDDLE LEVEL SCHOOLS

The Comprehensive School Reform (CSR) program was implemented in 1998 by the United States Department of Education and authorized as Title I, Part

Table 17.1

Essential Characteristics of Middle Level Teachers

NMSA (1981)	Buckner and Bickel (1991)	Arth et al. (1995)	Roney (2001)
<ol style="list-style-type: none"> 1. Positive self-concepts 2. Knows subject matter 3. Maintains classroom control 4. Displays optimism 5. Shows enthusiasm 6. Demonstrates flexibility 7. Acts spontaneously 8. Demonstrates caring 9. Respects and accepts others 10. Good listeners and communicators 11. Uses varied activities and materials 12. Promotes successful experiences 13. Monitors learning 14. Structures instruction 15. Understands young adolescent developmental characteristics 	<ol style="list-style-type: none"> 1. Positive self-concepts 2. Knows subject matter 3. Maintains classroom control 4. Displays optimism 5. Shows enthusiasm 6. Demonstrates flexibility 7. Acts spontaneously 8. Demonstrates caring 9. Respects and accepts others 10. Good listeners and communicators 11. Uses varied activities and materials 12. Promotes successful experiences 13. Monitors learning 14. Structures instruction 16. Sense of humor 	<ol style="list-style-type: none"> 1. Self-confident 2. Interdisciplinary knowledge of subjects; depth of content knowledge in one or more areas 3. Establishes and maintains disciplined learning environment 9. Sensitive to differences; respects and celebrates others 12. Dedicated to welfare and education of young adolescents 13. Ensures all young adolescents will succeed in learning 14. Utilizes wide variety of developmentally appropriate instructional strategies 15. Makes decision based on understanding adolescent development 17. Works collaboratively 	<ol style="list-style-type: none"> 1. Self-aware and self-motivated 2. Being prepared with a knowledge base 3. Being respectful through classroom and lesson management 4. Being positive 5. Shows enthusiasm 6. Adaptable and flexible 7. Has fun 8. Loves kids 10. Good communication skills 11. Understands need for variety of teaching strategies 15. Understands young adolescent developmental challenges and changes 16. Learns to laugh with others 17. Develops critical relationships with colleagues and teams

- | | | | |
|--|---|--|--|
| 19. Adapts curriculum and instruction to developmental needs | 18. Evaluates fairly | 18. Varies evaluation techniques | |
| 20. Addresses individual learning | 20. Addresses individual learning | 19. Committed to integrated curriculum | |
| 22. Asks varied questions and promotes thinking | 22. Asks varied questions and promotes thinking | 21. Works closely with families | 21. Collaborates with parents and families |
| 23. Easy to understand | 23. Easy to understand | | |
| 24. Encourages self-responsibility | 24. Encourages self-responsibility | 25. Understands and welcomes role of advisor | |
| | | 26. Recognizes developmental goals of middle level education | |
| | | 27. Develops positive relationships in variety of environments | |
| | | 28. Acquires, creates, and utilizes variety of resources | |
| | | | 29. Patient |
| | | | 30. Honest |
| | | | 31. Creative |
| | | | 32. Empathetic |
| | | | 33. Circumspect |
| | | | 34. Willing to learn from mistakes |

Source: Kathleen Roney. "The Effective Middle School Teacher: Inwardly Integrated, Outwardly Connected." In *The Handbook of Research in Middle Level Education*, edited by Vincent A. Anfara, Jr. Greenwich, CT: Information Age Publishing, 2001.

F, of the *Elementary and Secondary Education Act*. Its purpose was to help raise student achievement by assisting public schools across the country to implement effective, comprehensive school reforms that are based upon scientifically based research and effective practices. Although the funding for CSR comes from the federal government, individual states were allowed some flexibility in how the monies were distributed to their schools. Based on their specific needs for improvement, schools were permitted to select from state-approved lists of CSR models that they could implement. However, schools were held accountable for demonstrating progress in the federally mandated components of the CSR program and therefore were encouraged to select a school reform model based upon demonstrable research and effective practices.

The U. S. Department of Education recognizes many CSR models, but in the early stages of CSR in 1998, none of the approved designs focused primarily and specifically on the middle-grade levels (grades five through eight). Subsequently, several models were developed or evolved/adapted from existing elementary or high school designs to focus on comprehensive school reform for middle level schools, including nationally known and recognized models as well as regional “home grown” designs. The Catalog of School Reform Models, published by the Northwest Regional Educational Laboratory, lists all of the approved CSR models; however, their list is limited to only the CSR models that are available for implementation nationwide; there are no listings for locally developed models—those serving schools in a single district or state. The CSR models specifically designed to address comprehensive school reform in middle level schools are described and discussed below.

AIM AT MIDDLE-GRADES RESULTS

Developed by the Education Development Center and launched in 2000, the Association of Illinois Middle Schools (AIM) at Middle-Grades Results is a comprehensive school improvement program that assists middle-grades schools in becoming high-performing learning and caring organizations. AIM guides schools in becoming academically excellent, responsive to the developmental needs of young adolescents, and socially equitable. AIM schools improve learning and foster healthy development for all students. The goal of AIM is that all middle-grades

students meet challenging standards and are prepared to succeed at the next stage of learning and growing. During the 2003–04 school year AIM was implemented in schools in five states nationwide.

AIM schools agree to implement six key design elements, including (1) rigorous and developmentally responsive curriculum, instruction, and assessment; (2) a safe and healthy school climate for learning and development; (3) ongoing professional development that results in an inclusive and powerful learning community; (4) strong links between family, school, and community; (5) collaborative leadership; and (6) innovative use and integration of technology to support curriculum, instruction, assessment, and professional development.

AIM works with schools for three or more years to build the internal capacity for continuous improvement. They offer a number of key services to middle-grades schools so that all students achieve success. First, they assist in the establishment of a school Leadership Team (administrators, teachers, and parents) that is responsible for assessing the current status of teaching and learning in the school, building a shared vision, and creating the conditions under which school improvement can occur. Second, they establish and support faculty inquiry teams—small groups that meet regularly by grade level and/or discipline to reflect on and analyze teaching practice, student work, research-based approaches to curriculum, instruction, and assessment, and to reflect on results. Third, they conduct a Teaching for Understanding Institute—a professional development program that provides a formal structure for designing curriculum, instruction, and assessment aligned with performance standards at each grade level. In addition, they provide an annual leadership symposium and ongoing and intensive technical assistance.

DIFFERENT WAYS OF KNOWING

Different Ways of Knowing provides research-based, field-validated school improvement services and products developed by the Galef Institute, an educational nonprofit that helps schools nationwide enhance and accelerate their capacity to reach their goals for students and student groups.

This comprehensive school reform design helps teachers recognize and cope with the differences among students in the eleven- to fourteen-year-old age group. They train teachers to provide middle

grades students with academic experiences that are academically, developmentally, and socially responsive. They help schools form multiple small communities of learners so that every child is known by at least one adult who serves as mentor and guide. They work with teachers to integrate research-based best practices into curriculum, instruction, and assessment to ensure success for every student. They work with schools to improve student performance by embracing key elements that research suggests helps middle school students learn best, including small, supportive learning communities, cooperative learning strategies used throughout the day, meaningful and rigorous curriculum content, responsive support systems that assist students, programs that ease transitions into and out of the middle grades, and active family and community roles.

Different Ways of Knowing offers middle level schools a suite of services that are focused on supporting schools in six key areas: (1) planning standards-based curriculum, assessment, and instruction for every student and student group; (2) individualizing instruction to support student inquiry and self-directed learning; (3) teaching strategies that expert learners use in reading and writing to close the achievement gap; (4) teaching strategies that raise performance in mathematics to close the achievement gap; (5) integrating the visual, performing, literary, and media arts in all content areas to accelerate learning gains for all student groups; and (6) developing leadership to achieve required goals for student progress.

MAKING MIDDLE GRADES WORK

Making Middle Grades Work, the Southern Regional Education Board's (SREB) middle grades' initiative, is designed to help states, districts, and schools look at what they expect, what they teach, and how they teach young adolescents to prepare for success in further education. Making Middle Grades Work is a network of schools, districts, and states committed to implementing ten essential elements in a comprehensive improvement framework. The elements focus on a rigorous and challenging academic core curriculum for all students and on the teaching and learning conditions that support continuous improvement in student achievement.

With the support of the Edna McConnell Clark Foundation, SREB provides member states and schools

with technical assistance, publications, assessments, and networking services. As school sites identify the help they need to implement the framework, SREB links them to specific professional-development resources. A summer conference enables schools to learn what works with other middle-grade schools and to plan further actions to improve student achievement. There are over one hundred schools in sixteen states currently implementing Making Middle Grades Work.

The goal of Making Middle Grades Work is to raise the academic achievement of all middle grades students to at least the basic level as defined by the National Assessment of Educational Progress (NAEP) and to have an increasing percentage of middle grades students performing at proficiency levels as defined and measured by NAEP. To accomplish this goal, Making Middle Grades Work proposes: (1) that all students learn a rigorous core curriculum of mathematics, reading across content areas, English/language arts, science, and social studies; (2) students are taught by highly qualified teachers who hold a content major or minor in the subject(s) they teach; (3) teachers engage students through relevant, hands-on materials and activities; and (4) all students leave eighth grade prepared for success in a challenging and accelerated high school curriculum. Making Middle Grades Work will assist middle grades schools to implement the essential elements in the comprehensive improvement framework by creating key conditions that support improved academic achievement and by developing readiness indicators for students exiting the middle grades.

MIDDLE START

In 1994, the W. K. Kellogg Foundation, together with regional and national partners, launched Middle Start, a comprehensive school improvement effort that focused on improving the quality of teaching and learning in Michigan's middle-grade schools, particularly in schools and districts with high percentages of "at-risk" students. In 1998, Middle Start was approved by the Michigan Department of Education as a "home grown" comprehensive school reform model. The Middle Start National Center is currently housed at the Academy for Educational Development. A regional variant of Middle Start, Mid South Middle Start, was initiated by the Foundation for the Mid South in 1998 and works with middle

level schools in Arkansas, Louisiana, and Mississippi. Since 1998 nearly forty middle level schools in Michigan have selected Middle Start as their CSR model.

Middle Start has four guiding principles. *Reflective review and self-study* engages staff in ongoing inquiry into teaching and learning, using both internal and external reviews of student work, curriculum, instruction, and teacher assignment. *Effective small learning communities* promotes interdisciplinary teams at every grade level and teams of teachers meet during common planning time to set instructional priorities, develop interdisciplinary units, conduct reviews of student work to assess the team's direction and needs, and communicate with parents. *Rigorous curriculum, instruction, and student assessment* challenges a school to explicitly focus on improving student learning and achievement. The school matches rich curriculum with best instructional practices and exemplary assessment to realize the full potential of each student. *Distributed leadership and sustainable partnerships* cultivates sustainable partnerships with families, the district, the school board, local businesses, universities, and other community groups for the purpose of enhancing student learning.

Middle Start provides support to schools undertaking comprehensive school reform through monthly on-site coaching, high-quality professional development, the School Improvement Self-Study (developed by the Center for Prevention Research and Development at the University of Illinois), access to a regional partnership of agencies, universities, and advocacy groups, and ongoing leadership workshops and school networking conferences.

SUCCESS FOR ALL MIDDLE SCHOOL

Developed by Robert Slavin and his colleagues at Johns Hopkins University, Success for All Middle School is a model of middle school reform based on the Success for All (SFA) reading program—a comprehensive, effective, and replicable program for the elementary grades. Primary goals of the middle school program are to assess student strengths and weaknesses, fill in existing gaps in their skills, and provide a bridge to more challenging content with practical applications. The design also hopes to strengthen students' relationships with both family and community. The SFA Middle School design expects eventually to incorporate cooperative learning strategies into all subject areas and to

integrate language arts throughout the school day.

The SFA Middle School model believes that children in the middle grades learn best when learning communities remain small and supportive, curriculum content is both meaningful and challenging, family and community play an active role in education, responsive support systems are in place to assist students, and programs exist to ease students' transition both into and out of the middle grades.

The specific goals of the model are: (1) to increase the number of students reading at or above grade level by a school's annual yearly progress goals or better; (2) to produce integrated, academically rigorous curriculum to increase student achievement on performance-based measures in reading, mathematics, science, and social studies; and (3) to improve school climate by increasing attendance rates each year of implementation of the program, increasing students' academic self-concept and self-esteem, increasing parent and community involvement, and decreasing the number of suspensions and discipline problems.

The program includes a well-established curriculum including student materials and teacher manuals, ongoing teacher training, and follow-up support from SFA.

TALENT DEVELOPMENT

Talent Development Middle School (TDMS) is a national whole-school reform model developed by researchers, educators, and experienced curriculum writers at Johns Hopkins University in collaboration with middle school practitioners. It is specifically designed for urban middle schools that serve high-poverty populations. Talent Development Middle Schools implement standards-based, facilitated instructional programs in reading, English, language arts, mathematics, science, and U.S. history. Its goal is to provide all students the opportunities and support they need to achieve and to provide all teachers with the training and support they need to deliver standards-based instruction. The model is typically phased in over a three-year period. Currently it is being implemented in twenty-one schools in five states.

The Talent Development Middle School model contains eight fundamental components that transform a school into a high performance learning community by establishing the standards-driven curriculum, instruction, school organization, and pro-

professional development needed in order for all students to learn challenging academic materials and to prepare for successful futures. Key elements of the reform include: (1) student team literature, an innovative, thoroughly tested, and highly effective cooperative learning approach; (2) a research- and standards-based mathematics curriculum that blends skill building with problem solving; (3) a hands-on inquiry-oriented science curriculum linked to national standards and benchmarks; (4) a U.S. history course; (5) extra-help programs in mathematics or reading for students who need them in order to succeed at the challenging learning tasks they face; (6) innovations in school organization that allow teachers, students, and families to establish strong bonds and close, caring relationships; (7) a three-year career and education exploration course for sixth, seventh, and eighth graders; (8) the Partnership Schools model for establishing strategic school-family-community partnerships; and (9) focused and sustained professional development in reading/English/language arts, mathematics, science, and U.S. history, with follow-up in-school support by highly trained facilitators.

Facilitated instructional programs integrate state-of-the-art instructional materials, effective instructional practices, linked assessments, focused and sustained staff development, and in-classroom support. All of these elements work together in a systematic and sustained manner to realize broad-based achievement gains.

TURNING POINTS

Turning Points is a New American School (NAS) design for comprehensive middle school reform coordinated by the Center for Collaborative Education (CCE) in Boston, Massachusetts. It focuses on creating a professional collaborative culture and using database inquiry to improve teaching and learning for all students. Turning Points seeks to create high-performing middle schools, especially those serving high percentages of low-income students and students of color. The design is driven by one overarching goal—ensuring success for every student.

Turning Points is based on the Carnegie Corporation's 1989 report, *Turning Points: Preparing American Youth for the 21st Century*, and ten years of research and practice in middle schools across the country. The *Turning Points* report recognized the need to strengthen the academic core of middle schools and

establish caring, supportive environments that value adolescents. In 1998 Carnegie turned to CCE to develop a whole-school reform design that would be based on the research and work of the preceding nine years. CCE launched the National Turning Points Network in August of 1999, and in January 2000, Turning Points became a New American Schools comprehensive school reform design. The Turning Points design for comprehensive reform uses a network of regional centers in twelve states and is currently being implemented in nearly seventy schools.

Turning Points middle schools commit to a multiyear, systemic change process that is based on seven guiding principles framed in *Turning Points 2000*, the ten year follow-up to the Carnegie Corporation's seminal report (Jackson and Davis 2000). The seven Turning Points principles are the foundation for the design and creation of a strong middle school vision. The principles form a framework for creating middle schools that address the needs of young adolescents. Six practices translate these principles into effective action that, when approached in an integrated fashion, lead to significant and sustained improvement in student learning and achievement.

Turning Points provides schools with support to help implement comprehensive reform, including: thirty to thirty-five days of on-site coaching, site-based professional development and networking with teachers in other schools, the Turning Points Self-Study (developed and administered by the Center for Prevention Research and Development at the University of Illinois), conferences and institutes, access to publications and technology, and accountability and assessment of student learning.

Steven B. Mertens

STUDENT ACHIEVEMENT AND THE MIDDLE SCHOOL CONCEPT

Questions still abound regarding the implementation and effectiveness of middle-level reform. Has the reform of middle schools had the intended consequences of improved academic performance and socioemotional development? The issue of effective-

ness is made more public and exacerbated by the results of educational studies like the Third International Mathematics and Science Study (TIMSS). Arming themselves with findings from this study, educational researchers and policymakers questioned the “less than rigorous curriculum” alleged to exist in many middle schools, and characterized middle schools as “the wasteland of our primary and secondary landscape” (Tucker and Coddington, cited in Bradley 1998), “a crack in the middle” (Killion and Hirsh 1998), and a “muddle in the middle” (Bradley 1998).

This emphasis on linking the middle level concept to heightened student academic performance is not new. Long before the attacks appeared in *Education Week* in 1998, Ronald D. Williamson, J. Howard Johnston, and Laurel M. Kanthak (1995) commented, “Middle schools must accept the challenge of addressing student achievement. Student achievement must be given the highest priority in the mission of the middle level school” (p. 6). In their manifesto for middle-grades reform, Joan Lipsitz et al. (1997) wrote, “We speak with one voice, grounded in our collective experience and buttressed by compelling research data that demonstrate . . . that sustainable middle-level school reform is achievable” (p. 534). But grounded in realism they continue, “We have not seen the widespread dramatic improvement in academic outcomes we had hoped for” (p. 535).

Responding to her reading of *The Exemplary Middle School* by William M. Alexander and Paul S. George (1981), Jill F. Russell (1997) noted that there is the assumption that “according to middle-level theory, if the middle level philosophy is implemented, the outcomes of enhanced personal development, group citizenship, and achievement will be attained” (p. 170). But attempts to ascertain the relationship between middle-level reform (specifically the recommendations in *Turning Points* [1989]) and student achievement have yielded ambiguous and conflicting results. There are an insufficient number of studies, a lack of longitudinal studies, weak research designs, difficulties with comparing studies with conflicting designs, and problems with the effects of extraneous variables (like socioeconomic status) on outcomes (Van Zandt and Totten 1995).

Indeed, the landscape of this corpus of research is painted utilizing many different brushes and diverse styles with the resulting product being very confusing. But, as mentioned earlier, there is an urgency

regarding research in this area. Acknowledging this urgency, Robert D. Felner and his associates (1997) wrote, “Although a more well-developed research base does not, by itself, ensure more successful reform efforts, without such a foundation the progress and fruits of reform efforts will continue to be disappointing” (p. 41).

The inconclusive nature of the findings related to the effects of middle school practices on student achievement has been documented (see NMSA 2001b; Roney, Anfara, and Brown 2002; Van Zandt and Totten 1995). But this is not unusual in the realm of educational research. Reviewing the literature on many different educational topics will reveal research that supports, negates, or shows no difference in the relationship between the variables being studied. Importantly, the inconclusive nature of middle school research should not be adopted as a rationale for inaction or refusal to move forward in the restructuring of middle schools. There is, indeed, a promising body of research that demonstrates positive effects for their restructuring.

STUDENT ACHIEVEMENT AND HOLISTIC IMPLEMENTATION OF THE MIDDLE SCHOOL CONCEPT

Two major studies have been conducted that look at the reform of middle level schools and their holistic implementation of the middle school concept as delineated in *Turning Points* (Carnegie Council on Adolescent Development 1989). These include research conducted by Valerie Lee and Julia B. Smith (1993), and Felner et al. (1997).

Lee and Smith (1993) evaluated how middle school policies and practices influenced the students who attend them, focusing specifically on achievement, engagement, and equity issues. The sample for this study was drawn from the National Education Longitudinal Study (NELS) of 1988. Because of the nature of this database, Lee and Smith acknowledged that they are “not sure whether the sample of students in schools that reported that they engage in practices like heterogeneous grouping and team teaching actually encountered instruction in this way” (p. 180). Neither did they know the level of implementation of these practices. Specifically they looked at reduced departmentalization, heterogeneous grouping, and team teaching as a “com-

posite measure” of restructured middle schools.

Lee and Smith’s findings indicated that the elements of restructuring were positively associated with academic achievement and engagement with schooling of eighth graders. Students who attended schools that encourage team teaching evidenced higher achievement. Additionally, less grouping by ability and a less rigid departmental structure appeared to promote social equity in achievement among students. In relation to engagement, Lee and Smith found that “although attending restructured schools may positively influence academic engagement, this engagement may coexist with higher levels of at-risk behaviors” (p. 180).

Felner et al. (1997) conducted the most significant and compelling research that acknowledges the necessity of implementing *Turning Points*’ recommendations as a comprehensive reform initiative. This team of researchers has been studying what is now a network of more than seventy schools in Illinois since 1991. Schools participating in the Project Initiative Middle Level (PIML) network represent a full range of geographic, demographic, and size characteristics, including rural, suburban, and urban schools.

Felner et al. sought to “assess and evaluate the process of implementation of the recommendations of *Turning Points* for middle grade reform, as well as their impact on students’ academic achievement, socioemotional development, and behavioral adjustment” (p. 42). Of particular concern was the association between the levels of implementation of the reform that participating schools attained and relevant student outcomes. The core of the evaluation is a compressed longitudinal design, obtaining data on sets of schools that are at different levels of maturity (high, partial, or low) in reform implementation. The primary source of data is a set of annual surveys, the High Performance Learning Communities Assessments (HiPLaCes-A). These surveys are administered to teachers, staff members, students, administrators, and selected parents. Additional data are obtained from student records, attendance, and scores (reading, mathematics, and language arts) on local and state achievement tests.

Results of this longitudinal study indicated, “across subject areas, adolescents in highly implemented schools had higher achievement (as measured by the Iowa Test of Basic Skills and the California Test of Basic Skills)

than those in nonimplemented schools and substantially better than those in partially implemented schools” (p. 55). Felner et al. concluded, “broad-range enhancements and adjustment are not obtained until implementation is quite mature, comprehensive, and conducted with a high degree of fidelity” (p. 67).

THE MIDDLE SCHOOL CONCEPT: STUDENT ACHIEVEMENT AND IMPLEMENTATION

In contrast, there is a vast body of literature that focuses on individual components of *Turning Points*’ recommendations, such as teaming and advisory programs, and their effect on student achievement. A number of studies focus on the interdisciplinary teaming of teachers (e.g., Alspaugh and Harting 1998; Arhar, Johnston, and Markle 1989; Ashton and Webb 1986; Cotton 1982; Rosenholtz 1989) and its effect on student achievement. These studies help to demonstrate the ambiguous and inconclusive nature of this research.

Looking at the effects of interdisciplinary teaming, Joanne M. Arhar, J. Howard Johnston, and Glenn C. Markle (1989) found that the teaming of teachers increased student engagement in academic tasks, helped to clarify learning goals, and led ultimately to higher student achievement. Patricia T. Ashton and Rodman B. Webb (1986), as well as Susan J. Rosenholtz (1989), suggested an indirect relationship between teacher collaboration and improved student outcomes. John W. Alspaugh and Roger D. Harting (1998) studied the effects of interdisciplinary teaming versus departmentalization on student achievement in middle schools. Their findings indicated that no overall statistically significant differences were found for reading, mathematics, science, and social studies in grades six through eight in departmentalized versus teamed schools. But, significantly, the authors noted that teaming merits further investigation as a potential strategy for mediating student achievement loss associated with the transition to middle school. Kathleen Cotton (1982) concluded that neither interdisciplinary team organization nor the traditional departmental organization promoted greater student achievement. In 1992 Sally N. Clark and Don C. Clark, utilizing nine studies con-

ducted between 1964 and 1972, conducted a meta-analysis related to interdisciplinary teaming. They concluded that teaming was related to gains in student achievement.

THE MIDDLE SCHOOL CONCEPT: INVOLVED VERSUS NOT INVOLVED SCHOOLS

In this category research is examined that was done in Michigan by the Center for Prevention Research and Development (CPRD) and in North Dakota as part of the Middle Grade School State Policy Initiative (MGSSPI). Steven B. Mertens, Nancy Flowers, and Peter Mulhall (1998) looked at 155 Michigan middle schools that had high numbers of economically disadvantaged students and that were participating in the Middle Start Initiative funded in 1994 by the W. K. Kellogg Foundation. Surveys (the School Improvement Self-Study) were conducted in 1994/95 and in 1996/97 by the Center for Prevention Research and Development. This Self-Study uses twenty-four scales to measure progress in dimensions of reform including, for example, curriculum, school climate, instruction, family involvement, professional development, and school organization.

Specifically, they focused on trends related to teaching practices and learning environments and the relationship of these environments to student achievement, behaviors, and attitudes. By design the researchers compared and contrasted the progress of schools that were highly involved in the Middle Start Initiative (a total of twenty-one schools) to all other Michigan middle schools (134 schools). Their findings indicate that Middle Start schools improved in both reading and math achievement scores over the two-year period, as measured by the Michigan Educational Assessment of Progress (MEAP). "While seventh-grade reading and math MEAP scores for the nongrant schools matched the state average and were higher than the grant schools, grant schools displayed the most dramatic gains in reading and math (+10 and +6 percentage points, respectively)" (p. 3).

Students said that they had higher levels of stress to succeed academically but felt safer at the school in 1996/97 than they did in 1994/95. Additionally, Middle Start schools displayed several posi-

tive improvements in the areas of student adjustment, behavior, and substance use (a decrease in the reported use of alcohol). Students reported a more positive self-esteem and academic efficacy. Lastly, teachers reported working more effectively to serve the needs of early adolescents and having more contact with parents and guardians. Schools implementing the Middle Start Initiative are showing improved school capacity for continuous progress.

CPRD is also a partner in the expansion of this project with the Foundation for the Mid South Middle Start. Starting in 1998, middle schools in Louisiana, Arkansas, and Mississippi participated in this project. In the area of academic achievement, the Arkansas Middle Start schools (eighty schools) scored slightly higher on the 1998 reading and language achievement tests (SAT9) than the statewide group of middle-level schools. In Louisiana, Middle Start schools (sixty-eight schools) scored about the same on the Iowa Test of Basic Skills (ITBS) achievement tests as the statewide group of middle schools. In Mississippi (thirty-six schools), student achievement in language arts, reading, and mathematics was measured by the CTBS/5. Achievement scores for Middle Start schools were nearly identical to the state average for all schools. In short, these findings seem to suggest that Middle Start schools, despite their higher percentages of economically disadvantaged students, are keeping pace with the state averages (state averages include a higher percentage of more affluent schools).

John Backes, Allen Ralston, and Gail Ingwalson (1999) examined the impact of middle school practices on student achievement in North Dakota's Middle Grade School State Policy Initiative (MGSSPI) schools (called BRIDGES schools). The major question asked was, "What effect has the implementation of middle level practices by BRIDGES project schools had on student achievement in grades six through eight compared to non-BRIDGES schools in North Dakota?" The authors of this study admit that they "assumed that each of the recommended middle school practices had been implemented, [and] that students in BRIDGES project systemic-change schools should have measurable gains in student achievement because of the implementation of these practices." (p. 49).

The findings of the Backes et al. study indicated

that the composite grade equivalent score from grade six to eight was higher in BRIDGES project schools than in non-BRIDGES schools in the areas of reading vocabulary, language mechanics, study skills, science, and social studies. There was no difference in composite grade equivalent scores in reading comprehension and spelling. Non-BRIDGES students outperformed BRIDGES students in the areas of language expression, math computation, and math concepts and applications.

SUMMARY OF CURRENT RESEARCH

The inconclusive nature of the findings related to the effects of middle school practices on student achievement is evident. As Russell (1997) wrote, “Unfortunately, this model’s impact on the education of early adolescents has not been evaluated thoroughly. Consequently, the relationship of middle-level education to student achievement, in particular, remains unclear” (p. 169). While we can criticize much of the research that exists and call for further research, we should be encouraged that there is substantial literature that exists that supports implementing middle school restructuring. We should also not forget that the dilemma in which we find ourselves, in the process of developing a strong research foundation for the middle school movement, is not atypical of educational research in general.

There continue to be issues that make establishing a connection between the middle school concept and improved student performance problematic. Importantly, we cannot ignore findings that note that socioeconomic status was found to be the most significant correlate to student achievement (Hough and Sills-Briegel 1997), that many schools serving large numbers of economically disadvantaged students provide a much less supportive learning environment and therefore lower student achievement (Stephens and Jenkins 1994), or that previous student achievement is a powerful variable whenever predictions are made about subsequent achievement (Russell 1997).

The bottom line of this corpus of research is summarized in NMSA’s Research Summary #12: Academic Achievement (NMSA 2003). There it is noted that: (1) the issue is complex, (2) schools which implement more *Turning Points*’ recommendations show greater gains in student outcomes, (3) the aim is equitable high achievement for all types of students, (4)

the interrelationship of many factors affects student outcomes, and (5) there is a strong link between socioeconomic status and achievement (NMSA 2003).

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ISSUES IN MIDDLE SCHOOL CURRICULUM AND INSTRUCTION

Middle school curriculum and instruction share a dynamic interdependent relationship. Each component relates to the other: curriculum is a plan for student learning and instruction is the process of putting the plan into action. Though inextricably connected and intertwined, curriculum and instruction in middle schools are addressed independently in the following sections.

CURRICULUM

Curriculum, a plan to engage students, includes student learning goals, instructional experiences, and assessment techniques, and serves as the vehicle for learning skills and knowledge in schools. Curriculum can be a fixed or variable script for learning. Defined as “the courses of study in an educational institution,” curriculum delineates which skills or content are to be learned, how the skills or content will be learned, and what evidence will be collected to know that the skills or content was mastered. The middle school course or curriculum has its roots in secondary education.

Organizational shifts in secondary education were a step toward a middle grades configuration. In the 1890s, secondary schools expanded to encompass six grades (7–12) in order to discourage attrition and retain students in schools as well as provide a more challenging and content-specific curriculum. In the early 1900s, secondary schools were subdivided into two levels: junior high (7–9) and senior high (10–12) that shared similar ideology and curricular emphasis. The curriculum in the junior high, the predecessor of middle schools, was separated into distinct disciplines. In addition to structural changes, a movement toward a more child-centered curriculum began. G. Stanley Hall pioneered a flexible and

developmental curricular and instructional approach. John Dewey proposed curriculum that centered on students' interests, problem solving, and social experiences rather than separate subject areas. Also in the early 1900s, differences were noted in the educational needs of young adolescents and older adolescents. In junior highs, the notion of curriculum based on exploration and individual interest had emerged.

By the 1930s, two different approaches to secondary curriculum were evident: the traditional, subject-centered curriculum and an experimental curriculum that was problem-based and centered on learners' needs and interests. Researchers compared the effects of traditional separate-subject and experimental curricular approaches in the Eight Year Study (1932–40), a comprehensive long-range research study (Lipka et al. 1998). In experimental schools, the sharp divisions within broad disciplines such as science, mathematics, and social studies were blurred or eliminated. Other disciplines, such as English and social studies, were integrated. In 1942, the study's report indicated that graduates from secondary schools with experimental curricula were superior to those from schools with conventional separate-subject curricula. World War II eclipsed the Eight Year Study's findings that supported experiential curriculum, and subject-centered curriculum continued to dominate secondary education.

During the 1940s and 1950s, curriculum development theory influenced secondary education. Ralph Tyler articulated an innovative approach to curriculum design and evaluation in *Basic Principles of Curriculum and Instruction* (1949). He postulated four basic principles of curriculum development: (1) defining appropriate learning objectives, (2) establishing useful learning experiences, (3) organizing learning experiences to have a maximum effect, and (4) evaluating the curriculum and revising ineffective aspects. Tyler reasoned that the curriculum development process needed to start with the learning goals and objectives. His principles linked curriculum to instruction and shaped how secondary teachers planned and enacted the curriculum.

At the same, junior high curriculum struggled to serve two goals, providing a rigorous academic program and addressing the developmental needs of

young adolescents. Though junior highs retained more students, these institutions fell short of adequately addressing the developmental needs of young adolescents and remained departmentalized with a separate-subject focus. Criticisms of the junior high model gave rise to the middle school movement of the 1960s.

In 1963, William Alexander first used the expression "middle school" to describe the schools between elementary and high school (McEwin 1992). Alexander, regarded as the "father of the middle school," led the movement to create middle schools and a middle level curriculum that would meet the unique needs of young adolescents. The emergence of the middle school concept led to new educational trends during the 1960s and 1970s. Organizational changes such as interdisciplinary teaching teams and advisory programs supported a more learner-centered curriculum. Several curriculum models were suggested for the middle school. Donald Eichhorn's model focused on students' physical, cognitive, social, and cultural characteristics (Toepfer 1997). The Alexander model targeted personal development, skills for continued learning, and organized knowledge. John Lounsbury and Gordon Vars recommended unifying the curriculum using a problem-centered block-time model to examine young adolescents' personal and social concerns (1978). Conrad Toepfer advised that curricula be designed locally to better address young adolescents' characteristics and to serve specific community needs (1997). Developmental responsiveness to middle school students was at the center of these early curriculum models.

The National Middle School Association, founded in 1973, advanced middle level education and established a clear philosophical base for middle school curriculum. Dedicated to the development, education, and growth of young adolescents, this emergent professional organization underscored the importance of a middle level curriculum in publications and at professional development venues. In 1982, the National Middle School Association articulated its rationale and vision for middle schools in a position paper, *This We Believe*. Among the middle school essentials was a balanced curriculum based on the developmental needs of young adolescents.

Throughout the 1980s and 1990s, the middle

school concept and its curriculum gained national attention. The Carnegie Corporation of New York established the Carnegie Council of Adolescent Development, which in turn formed a Task Force on Education of Young Adolescents. The unique challenges of young adolescence were a part of the national agenda. The task force fueled organizational and curricular changes in middle schools with its landmark report, *Turning Points: Preparing American Youth for the 21st Century* (1989). Their eight recommendations included: Create small communities for learning; teach a core academic program; ensure success for all students; empower teachers and administrators to make decisions about the experiences of middle grade students; staff middle grade schools with teachers who are expert at teaching young adolescents; improve academic performance through fostering health and fitness; reengage families in the education of young adolescents; and connect schools with communities. The majority of middle schools responded by establishing interdisciplinary teaching teams to correlate subject areas and advisory programs, yet a core curriculum remained elusive. In response, middle level researchers and advocates redoubled their efforts to define middle level curriculum. James Beane conceptualized an integrated middle school curriculum with central themes drawn from the intersection of young adolescents' personal concerns and issues of society (1993). The focus on integrated curriculum was also apparent in *This We Believe: Developmentally Responsive Middle Level Schools*, a second position paper from the National Middle School Association (1995). This influential document called for middle schools to provide challenging, integrative, and exploratory curriculum.

Concurrently, the standards-based reform movement surfaced from public dissatisfaction with low student achievement of American students as compared to students from other industrialized countries. Influential private, political, and public sectors converged to work toward improving student achievement by setting high standards. Standards-based reform efforts swept the nation. State departments of education identified and adopted educational standards to raise student achievement. This accountability movement influenced curriculum development. Grant Wiggins and Jay McTighe

advocated the backward design process for developing curriculum (1998). Stages in the backward design process included: identifying desired results, determining acceptable evidence, and planning learning experiences and instruction. Wiggins and McTighe labeled their curriculum design process as "backward" because it was in contrast to the traditional process used by many educators, which began planning by selecting or creating educational activities. In the backward design process, adopted standards and acceptable evidence of learner understanding are identified prior to planning educative experiences. Starting with educational standards was not a new curriculum design approach. Fifty years earlier, Ralph Tyler articulated the reasonableness of using educational standards as the criteria for ascertaining the curricular content, preparing assessments, and selecting instructional practices and educative experiences (1949).

At the beginning of the twenty-first century, standards-based reform continues to influence American education, including middle school curriculum. Carnegie Corporation of New York sponsored a second report, *Turning Points 2000: Educating Adolescents in the 21st Century*, which kept the spotlight on curriculum for young adolescents (Jackson and Davis 2000). The report recommends a middle level curriculum that is grounded in academic standards, relevant to adolescents' concerns, and attentive to how students learn best. The intent of a standards-based curriculum is to ensure excellence and equity for all students. Using a backward design model, educators develop curriculum and assessment based on the agreed upon content standards before planning instruction. As a consequence, curriculum defines precisely what students should know and be able to do.

Discipline-Based and Integrated Curriculum

Core curriculum can be structured around subject area disciplines or integrated across the disciplines. In a discipline-based or disciplinary approach, curriculum is organized in separate subjects. Subjects such as language arts, mathematics, science, and social studies are departmentalized. Teachers from the same subject area work independently or collectively to develop curriculum based on subject-specific concepts and skills. Organizationally, departments and

department meetings support discipline-based curriculum. An important goal of the approach is to provide students with extensive and in-depth subject knowledge. This separate subject approach remains the traditional configuration in middle schools. Despite criticisms of fragmentation, the discipline-based structure to core curriculum dominates middle schools.

In contrast to the disciplined-based approach to core curriculum is the integrated approach. An integrated curriculum is organized around overarching ideas or broad concepts that cut across the subject area disciplines. Teachers from different subject areas collaborate systematically to connect discipline perspectives and learning processes. Integrated curriculum also accentuates the developmental needs and concerns of young adolescents. Organizational arrangements such as interdisciplinary teaching teams and common planning time support the integrated curriculum development. Integrated curriculum differs from the frequently disparaged topic-based curriculum, which is centered on appealing and sometimes superfluous themes.

Disciplinary and integrated approaches are charged with providing academically rigorous curriculum. Academic standards and accountability pressures have an effect on both approaches. These pressures have implications for another dimension of middle schools: the exploratory curriculum.

Exploratory Curriculum

Exploration is a hallmark of middle school curriculum. The principle of exploration is highlighted by the National Middle School Association's call for relevant, integrated, and exploratory curriculum. Since exploration can provide academic challenge and be developmentally responsive, it is widely accepted in middle schools. When infused across the entire middle school curriculum, exploratory programs serve several functions. First, young adolescents discover their abilities and interests, which supports their transition to adulthood. Next, exploratory activities disclose ways for students to make contributions to society. Finally, exploration introduces students to healthy and enriching activities. Exploration in the middle school curriculum may improve young adolescents' self-image, enhance self-esteem, and build confidence. While the no-

tion of exploration applies to the entire middle school curriculum, in reality, it usually takes place in exploratory courses.

Ideally, exploratory courses engage young adolescents actively and afford them with opportunities to learn new skills and try novel ways of thinking. Through elective classes, exploratory wheels, mini courses, and after-school programs, exploration provides students with authentic and hands-on experiences. Though vestiges of junior high's vocational emphasis such as industrial arts and home economics remain, more contemporary offerings are prevalent in middle schools. Foreign language, drama, music, art, health, life skills, and technology adjoin and extend the core middle school curriculum. Exploratory curriculum is critical to the development of young adolescents, yet accountability pressures compel middle schools to reduce exploratory courses. In light of the standards-based movement, Edward Brazee suggests that middle schools articulate how exploratory courses are integral to the middle school curriculum, promote the complementary nature of exploratory and core curriculum, and align exploratory curriculum and core curriculum concepts (2000). Exploration adds meaning and relevance to the middle school curriculum.

INSTRUCTION

Instruction, the process of putting the curriculum into action, functions as part of the system for acquiring skills and information in schools. Linking curriculum and instruction is a complex and variable process. Identified as "the act, practice, or profession of instructing" (American Heritage Dictionary 2000), instruction is the purposeful direction or guidance of the learning process. Professional educators, theorists, and researchers often refer to the act or profession of teaching as pedagogy. In schools, the act of instructing or teaching occurs typically in classrooms.

At the onset of the twentieth century, the emphasis in education was content, not instruction. Secondary education focused on the presentation of knowledge and acquisition of knowledge, rather than instruction or instructional practice. Teachers were presenters of knowledge and students were vessels to be filled. In the early 1900s, new perspectives on instruction emerged. John Dewey emphasized inquiry

and the exchange of ideas in the learning process. The Progressive Education Association, influenced by Dewey, articulated a set of instructional principles. Among these tenets were the notions that teachers need to consider students' developmental needs, plan experiences for students to construct their own knowledge, and use inquiry as a primary learning tool. While proponents of these principles advocated instructional processes such as projects and group work, the presentation of knowledge dominated secondary schools (Marzano 2000).

The potential of instruction surfaced at the conclusion of an extensive research project, the Eight Year Study. Findings revealed the superiority of graduates from secondary schools with experimental curriculum and instructional practices over graduates from traditional secondary schools. An expansive report of the Eight Year Study documented exemplars of instruction. In experimental schools, instructional practices included students making use of reflective thinking and developing problem-solving techniques, which served as the basis for scientific inquiry. Overshadowed by the nation's attention on World War II, the findings had little direct influence on instructional practices in secondary schools. However, Ralph Tyler, who had directed the evaluation of the Eight Year Study, had a profound effect on both curriculum and instruction. Tyler's seminal publication, *Basic Principles of Curriculum and Instruction*, raised awareness about the relationship between curriculum and instruction (1949). He asserted that different types of content could require different types of instruction. Tyler's work sparked significant interest in instruction.

Attention on instruction diminished somewhat in 1957 with the launch of Sputnik, while curriculum and content knowledge grew in importance. Secondary schools stressed subject matter knowledge and content coverage. In the early 1960s, Jerome Bruner helped to stem waning interest in instruction. His publication, *The Process of Education*, advanced the notion that teachers' instruction could affect what and how students learn (1960). Also in the 1960s, Hilda Taba promoted instructional methods of inquiry and re-emphasized using different instructional practices for different types of content knowledge (Taba 1962). Though best known for her curriculum development model, Taba accelerated understanding of instruction. Throughout the 1970s, Bruner and

Taba's foundational work directed attention toward instruction and research on teaching.

The middle school's learner-centered curriculum and instruction models started to take root during the 1970s. Deep-seated instructional traditions were beginning to give way to more developmentally appropriate practices in middle schools embracing the middle school concept. Instructional practices such as problem solving and independent skills for learning emerged. Additionally, the very nature of instruction had changed dramatically. Middle school teaching responsibilities expanded to encompass human interaction, personal development, and participation in advisory programs. Adult interactions also escalated when teachers were positioned on interdisciplinary teaching teams as colleagues in the teaching and learning process. Collegial interactions of this magnitude were uncharted territory for most teachers. Teacher responsiveness to peers and young adolescents was evident in these emergent middle schools.

Prolific research on classroom teaching in the 1970s resulted in a body of literature on teacher effectiveness. Noted in literature on teacher effectiveness were instructional practices such as using advanced organizers, questioning techniques, grouping students, introducing and reviewing concepts, engaging student participation, and assigning seatwork and homework. During the 1970s and 1980s, learning strategies emerged as instructional tools. Defined as a plan or set of steps to accomplish a task or learn content, learning strategies were developed for different subject areas to help students become more effective learners. For perhaps the first time, teachers were teaching students how to learn.

The emphasis on instruction continued in the 1980s and 1990s. The National Middle School Association called for varied instructional strategies in *This We Believe* (1982). The organization's first position paper clarified the need for different types of instruction to effectively serve the wide-ranging developmental levels of students in middle schools. The Carnegie Corporation of New York's far-reaching report, *Turning Points: Preparing American Youth for the 21st Century* (1989), recommended that middle schools ensure student success through cooperative learning and other instructional approaches suitable for young adolescents.

Additionally, the report called for teachers and administrators to make decisions about the learning experiences of middle level students. The emphasis on instruction was also evidenced in the National Middle School Association's second position paper, *This We Believe: Developmentally Responsive Middle Level Schools* (1995), which challenged schools to provide varied teaching and learning approaches. Teaching practices needed to accommodate the diverse skill, ability, and knowledge levels of young adolescents.

At the beginning of the twenty-first century, the emphasis on instruction persists. Standards-based reform efforts compel teachers to use instructional approaches that prepare all students to achieve high standards. As articulated in *Turning Points 2000: Educating Adolescents in the 21st Century* (Jackson and Davis 2000), middle schools must focus on instructional practice. Middle school teachers are challenged to organize instruction around essential concepts and skills, adapt instruction to accommodate young adolescents' varying ability levels, and use instructional approaches that are culturally responsive. To improve instruction, teachers implement various models of instruction.

Two models of instruction that build on research and theory of instruction are cooperative learning and direct instruction. Both models have the potential to enhance the teaching and learning process.

Cooperative learning is an instructional model with a deep research base. Roger Johnson and David Johnson describe cooperative learning as students working together to accomplish shared learning goals (1999). Johnson and Johnson's cooperative learning model is widely used at every school level and consists of five basic elements: positive interdependence, face-to-face promotive interaction, individual accountability, social skills, and group processing. This instructional model incorporates social dimensions of learning and capitalizes on student interactions that are especially critical for young adolescents.

A second model of instruction, direct instruction, also has a strong research base. Direct instruction draws from theory about effective instruction and requires the use of well-scripted lessons. In the direction instruction model, teachers deliberately focus students' attention on the critical information or skills to be learned using a series of steps. Direction

instruction includes teacher presentation of content, rehearsal of content, guided practice, and ongoing checks for student understanding. Essential features of the model are highly organized lessons and explicit teaching routines.

VARIED INSTRUCTIONAL APPROACHES

Though teacher-directed instruction remains the most prevalent instructional practice in middle schools, learner-centered approaches to instruction are also evident. The cooperative learning model is used regularly in middle schools. In small groups, students collaborate to attain a shared learning goal. Another learner-centered model, inquiry, has a strong following. Inquiry models include problem-based learning and project-based learning. The problems or projects tend to be authentically integrative and draw on knowledge and skills from more than one discipline. Another authentic instructional approach is the classroom workshop. Types of classroom workshops include the reading-writing workshop popularized by language arts programs, history workshop, and science workshop. In each workshop approach, the classroom becomes the site of authentic student work.

A groundbreaking and comprehensive teaching approach is differentiated instruction. Advanced by Carol Ann Tomlinson, differentiation of instruction is designed to respond to the different needs of students (1999). Differentiation requires teachers to focus on the essential concepts and skills to be learned, and then modify the curriculum and instruction to attend to differences in students' prior knowledge. The approach unites instruction and assessment processes. In differentiated instruction, learning is viewed as collaboration between the teacher and student, which aligns with the developmental needs of young adolescents.

GROUPING FOR INSTRUCTION

Students are organized or grouped for instruction in one of two ways, in homogenous groups or heterogeneous groups. Homogeneous grouping, also known as ability grouping or tracking, organizes students by ability level. Students of similar ability are positioned or tracked into the same class or classes. In

middle school, tracking young adolescents restricts their cognitive and social interactions. Tracking often segregates students along class and racial lines. Despite negative consequences, tracking is pervasive in middle schools. An alternative to tracking, heterogeneous grouping, organizes students of different abilities in the same class or classes. Heterogeneous grouping works to promote equity and foster high achievement for all students. Both grouping practices significantly impact young adolescents' school experiences. In middle schools, the controversy over how to best group students for instruction continues.

CURRICULUM AND INSTRUCTION AS A DYNAMIC SYSTEM

Middle level curriculum and instruction interact as a dynamic system. Changes in any part of this system necessitate change in the other parts. Influences on curriculum and instruction come from national, state, and local arenas. Ultimately, middle school curriculum and instructional practices should cater to young adolescents' developmental characteristics and needs, respond to contextual conditions, and address societal demands.

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ADOLESCENT EDUCATION

For at least fifty years the vast majority of Americans have attended high school, and a solid majority have graduated from high school. But this near-universal enrollment of adolescents in high school is a historically recent phenomenon. In 1900 barely 10 percent of fourteen to seventeen year olds were enrolled in school. During the next five decades school enrollment in this age group exploded from the atypical to the norm: to 31 percent in the 1920, 50 percent in 1930, 73 percent in 1940, 76 percent in 1950, and 87 percent in 1960.

Prior to 1950, the word “dropout” did not exist in the American vocabulary, because it was assumed that many young people who had no interest in or need for the “higher education” of high school would quit school and go to work or get married and raise children. But in the 1950s what had once been viewed as normal and inevitable—quitting school and going to work—was reframed by some critics as dropping out, thus a failure both of the high school and of the dropout. According to the United States Department of Education’s National Center on Educational Statistics (NCES), 27.2 percent of teenagers quit school before graduation in 1960. Yet by 1970, this rate had fallen dramatically to 15 percent, the largest reduction in any decade on record. From there it diminished slowly to 14.1 percent in 1980, 12.1 percent in 1990, and 10.7 percent in 2001, as noted in NCES data (2001).

However, various gender and ethnic/racial/cultural groups did not drop out of school at the same rate. According to the NCES, males dropped out in 2001 at the rate of 12.2 percent; females at 9.3 percent. Whites dropped out at the rate of 7.6 percent; African Americans at 13.4 percent; Latinos at 25.3 percent.

In recent years, several researchers have challenged the National Center on Educational Statistics’ calculations of the dropout rate. Jay Greene’s

study (2002) that traced the same cohort of students from eighth grade in 1993 to 1998 found a high school graduation rate of only 71 percent, with a 56 percent graduation rate for African American students and a 54 percent graduation rate for Latino students. A study conducted for the Business Roundtable (Sum et al. 2003) using a similar methodology found almost the same graduation rate of 71.3 percent. A study published in 2004 by Walter Haney, George Madaus, and Lisa Abrams, relying on data from 1987/88 through 2000/01, found a graduation rate of 74.4 percent.

Haney et al. found enormous variations in graduation rates among the states. New Jersey (86 percent), North Dakota (84 percent), Iowa and Utah (83 percent), and Minnesota (82 percent) had the highest graduation rates in 2000/01. South Carolina (51 percent), Florida (52 percent), Georgia, Mississippi, and Tennessee (57 percent), New York (58 percent), and North Carolina and Arizona (59 percent) had the lowest graduation rates. Haney et al. also found that high school graduation rates declined in forty-three states during the 1990s, stayed the same in two states, and rose marginally in five states, with the largest gain of 6 percent in New Jersey. Most of the states had small declines in the graduation rate, but several states had large declines, including Hawaii (21 percent), South Carolina (14 percent), Tennessee (12 percent), and Florida and Mississippi (11 percent) (Haney et al. 2004).

Nettie Legters and Robert Balfanz in their 2001 study “How Many Central City High Schools Have a Severe Dropout Problem, Where Are They Located, and Who Attends Them?” found that about half of the high schools that they studied in central cities graduated fewer than 50 percent of their ninth grade enrollees, suggesting that a significant part of the high school dropout population lived in the thirty-five largest American cities and had attended between two

hundred and three hundred specific schools. In 2004 a study from the Harvard Civil Rights Project and the Urban Institute, "Losing Our Future: How Minority Youth Are Being Left Behind by the Graduation Rate Crisis," found that in 2001, only 75 percent of white students, 50 percent of African American students, 51 percent of Native American students, and 53 percent of Latino students received a high school diploma (Orfield et al. 2004).

What explains the significant variation between the NCES data and those of other researchers? Greene (2002) and Christopher Swanson (Orfield et al. 2004), co-author of "Losing Our Future," agree that the NCES formula generates data that profoundly underestimates the number of students who quit school without earning a high school diploma. Greene also notes that the NCES counts a GED certificate as a high school graduation, when the economic value of a GED and its likelihood of leading to further education are far more limited than an actual high school graduation.

It seems clear that there is a high school dropout crisis in our nation, particularly for young people of color who live in large cities. But what of students who graduate from high school? According to the Association of American Colleges and Universities (2000), 75 percent of high school graduates attend a two- or four-year college within two years of graduating from high school, and 90 percent of graduates say they hope to attend college at some point. Minorities comprise 28 percent of college students. Between 1960 and 2001, college enrollments grew from 4.1 million to 14.8 million, more than tripling in size, while the overall national population increased by 57 percent.

In the past twenty years many more high school students have taken and passed advanced placement (AP) courses, which they have often translated into college credit. Between 1984 and 1996, the number of students who took AP courses more than doubled, from 50 per 1,000 twelfth graders to 131 per 1,000 twelfth graders. In 2003 the number of students taking AP courses continued to grow, with an increase of 8.5 percent in the number of students taking AP exams. More African Americans took AP exams in 2003, with an increase of 12.9 percent; more Latinos, with an increase of 15.8 percent; more Native Americans, with an increase of 16.1 percent; and more students from low-income families, with an increase of 26.4 percent (The College Board, 1999, 2003).

High schools are failing, particularly in large cities. Yet high school students are taking more AP courses and exams than ever before and going to and graduating from college in record numbers. High school students are also applying to competitive colleges and universities in record numbers.

Most teens in the United States attend comprehensive high schools that fit within a conventional paradigm that was modeled on the new industrial organization of the early twentieth century and that became the norm in the second and third decades of that century. These high schools have more than 800 students. Students take five or six classes at once. Students are tracked by perceived ability into three or four tracks (honors, college preparatory, general, remedial). Teachers teach five classes and have a load of 150 or more students. Teachers have their own classroom, and students move from one room to another for each class. Teachers teach discrete subjects, such as mathematics or history or biology. To a significant extent, teachers apply a behavioristic or transmission model of learning: knowledge exists in the world outside of the student, and the student must memorize this knowledge. Students have only a few minutes to pass from one class to the next. Lunch period is twenty-five or thirty minutes long. Students organize themselves not as one school community but into cliques. The high school is governed largely through hierarchical and non democratic procedures.

Given the enormous contrast between the rapid pace of change throughout most sectors of American society and the entrenched stability of the comprehensive high school, the question raised is inevitable: must the American high school change? And if so, how?

David Marshak

HIGH SCHOOL STRUCTURE AND CURRICULUM, 1893-1945

In 1893 the Committee of Ten—five university presidents, the U.S. Commissioner of Education, a professor, two private school headmasters, and one public high school principal—led by Charles Eliot, the presi-

dent of Harvard University, issued its report on the desired high school curriculum (Eliot 1893). The committee proposed four courses of study: Classical, Latin/Scientific, Modern Languages, and English. What identified each course was its degree of focus on Greek, Latin, and modern languages. More important though than the variations among the courses were the similarities. Each course of study included five curricular “main lines”—English, mathematics, science, history, and foreign language—and was organized into separate subject classes, each lasting somewhat less than one hour. These were the first elements in what was to become the conventional paradigm of high school.

The committee also advocated that every subject to be taught in high school should be taught in the same way for all students. Students could have some choice in subjects but only a limited, carefully guided choice. Each subject should be given the same weight and value. The Committee of Ten’s report had enormous influence both in its time and throughout the following century, and it commenced an ongoing dialogue and conflict about what the curriculum should be in the American high school.

In 1918 the Committee on the Reorganization of Secondary Education, consisting of professors of education, educational administrators, and high school leaders and teachers, issued its *Cardinal Principles of Secondary Education* (Kingsley et al. 1918). The *Cardinal Principles* argued for a high school curriculum that included health, command of fundamental processes, worthy home-membership, vocation, citizenship, worthy use of leisure, and ethical character. The principles advocated for a greater variety of subjects to be offered and for greater flexibility in students’ election of their own courses of study. So a high school should offer a differentiated curriculum, and students could select their courses, often in relation to their vocational aspirations.

Of course, in 1892 only an elite of fourteen to seventeen year olds was in school, less than 10 percent of the cohort of young people in that age range. By 1918 more than 30 percent of young people attended high school, including many immigrants in the large eastern and Great Lakes cities, so the issues of teaching and learning had changed dramatically. Ellwood Cubberly, a professor of education at Stanford and a nationally recognized leader in education circles, articulated a widely held view when he explained that urban schools should abandon the

notion that all are equal and prepare young people for their inevitable status and roles in adult life, which could be determined largely by the social position of their families (Tyack 1974).

David Tyack (1974), in his book *The One Best System*, called Cubberly and his allies “administrative progressives.” They were elitists who wanted to differentiate the curriculum through what sounded like elective choice but quickly became what is now known as tracking. They were focused on social efficiency and social control. Administrative progressives viewed the new industrial processes of the early twentieth century, particularly the “scientific management” of Frederick W. Taylor and the mass production techniques of Henry Ford, as the modern paradigm for schools. They built public high schools that intentionally looked like factories, and they structured them to include seven- or eight-period days with periods of less than an hour, a different teacher for each subject, brief passing times between periods, a short lunchtime, tracking by perceived ability, and an overall vision of school as an authoritarian environment and learning as the memorization of data by students. In this effort the administrative progressives adopted a few elements from the Committee of Ten, particularly discrete subjects, and they added other elements of their own devising to construct what became the twentieth-century conventional high school paradigm.

The view of Cubberly and his allies provided one kind of enactment for the school program offered in the *Cardinal Principles*. A very different kind of enactment could be found in the values of educators who based their approach to schooling to a large extent on the work of John Dewey, who argued that school ought to be meaningful to young people in terms of their own frame of reference and that life in school should be connected to the lives of adults outside of school (Tyack 1974). Tyack called these educators “pedagogical progressives” to distinguish them from their opponents, the administrative progressives, and identified democracy, relevance, cooperation, and meeting the needs of individual students as their key values. The pedagogical progressives placed less emphasis on subjects and more emphasis on student activities and projects, student interest and engagement and choice, and democratic practice in schools.

Cubberly’s values and practices were profoundly

antithetical to those articulated by Dewey (although at least three historians, Diane Ravitch [2000] in *Left Behind: A Century of Failed Schools Reforms*, and David Angus and Jeffrey Mirel [1999] in *The Failed Promise of the American High School 1890–1995*, have for some reason recently ignored the hostility of the administrative progressives and the pedagogical progressives toward each other and lumped them together into a common camp of “progressives”). Yet ironically they both supported a high school curriculum more like that of the *Cardinal Principles* than the one proposed by the Committee of Ten. During the first three decades of the twentieth century, pedagogical progressives had much more impact in elementary schools than they did in secondary schools, although some did teach and lead in high schools as well. In the 1920s the industrial paradigm of high school propounded by the administrative progressives became the norm for public high schools in the United States, particularly in city schools. However, many small town and rural high schools escaped some elements of the paradigm at this time, particularly tracking, because they had too few students to track.

During the same years, the Committee of Ten’s approach—the same core academic curriculum for all students—was discarded by most public high schools as high school enrollment swelled dramatically, although the Committee’s ideas for discrete subjects and fifty-minute classes were maintained. With increased numbers of students came increased social class and ethnic diversity, and the fundamental response to this diversity in what was soon known as the comprehensive high school was differentiation of the curriculum into the college preparatory track (sometimes with two levels: honors and college prep), the general track, and the vocational and commercial tracks (the former mostly for boys, the latter mostly for girls). By the end of these years the core academic curriculum had mostly retreated into the private preparatory high schools of the upper class.

The institution of tracking ensured that many students from different backgrounds would have dramatically different high school experiences. At the same time that high schools reinforced the social status of some students, they provided access to social mobility for others. In the 1920s and even more so from 1945–75, high schools were an engine of upward economic and social movement for many young Americans. Since 1975 high school tracking seems

to have offered less mobility, particularly since the income of high school graduates has actually decreased in real dollars since 1980.

In the 1920s the junior high school began to proliferate throughout the nation. While the first junior high school was created in 1909 in Berkeley, California, it was only after World War I that the idea caught on, thus restructuring the high school into the senior high school, with grades ten to twelve. The stated purpose of the junior high was to provide a transition from the childhood-oriented arrangements of the elementary school to the more adultlike structure of the high school. Given this intent, it took only four decades for many educators to come to believe that the junior high had failed because it became for the most part a replication of the high school rather than a transition to it. In the 1960s the middle school movement rose up in response to this analysis.

During the first three decades of the twentieth century, John Dewey and the pedagogical progressives had a significant impact on elementary education, with thousands of schools at one point or another enacting progressive principles. But high schools had remained first under the sway of the Committee of Ten’s core curriculum and then, after the report of *Cardinal Principles*, had been shaped by the administrative progressives into industrially modeled, comprehensive high schools with differentiated, tracked curriculum. During the 1920s, high school enrollment soared from 31 percent to 50 percent, then from 50 percent to 73 percent in the 1930s.

In 1930 the Progressive Education Association (PEA), a national organization of pedagogical progressives, launched what became known as the Eight Year Study (Aiken 1942). These educators took note of the phenomenal growth in high school enrollment during the previous two decades. While they had helped to create and applauded the movement in high schools away from a core curriculum to a broader, more differentiated curriculum with some choices for students, they also saw the overarching high school paradigm as authoritarian, conventionally subject-based and tracked, and hostile both to the concerns and needs of young people and to democratic values. In addition, they perceived high schools that wanted to experiment to be constrained by the demands of colleges for conventional high school course completion if students wanted to be admitted.

The PEA enlisted Wilford Aiken to lead the study

that included thirty high schools across the nation, large and small, public and private, that had agreed to revise their educational programs in the following directions: to become more democratic both in the enactment of teaching and learning and in school governance, more inclusive of the present interests and concerns of young people as well as of the cultural heritage of America and of western civilization, more personalized for individual students, more engaging both of young people's search for meaning in life and for vocation, more integrative in terms of traditional subjects, greater focus on problem solving and habits of reflective thinking, and more open to experimentation and revision. There was no single plan or design for such revision; rather each school built on its own current design in ways of its own choosing. The study also found 300 colleges and universities that agreed to admit the students enrolled in these thirty schools if they met the graduation requirements of their own school, even if students did not meet more conventional course completion requirements.

The Eight Year Study found that students from the experimental schools did as well in college on traditional tests as did students from conventional high schools, but they performed better on tasks that required problem-solving skills and creativity. Indeed, the more the high school had moved away from the conventional paradigm of secondary school, the more powerful were the students' abilities to solve problems and act creatively. The study also found that integrative approaches to curriculum in high school produced highly favorable outcomes in college in terms of students' capacities for understanding. Finally, the students who had attended the experimental high schools completed their college education at the same rate as those who had gone to conventional schools.

Unfortunately for Aiken and his pedagogically progressive colleagues, the Eight Year Study was published in 1942 at a time when World War II consumed the attention of most Americans. So the findings of the study never entered any sort of national conversation about high school. Indeed, after World War II, the pedagogical progressives lost their energy and focus as a movement during the first years of the Cold War with the Soviet Union and, for more than a decade, they largely disappeared from the debate.

David Marshak

HIGH SCHOOL STRUCTURE AND CURRICULUM, 1945-83

After World War II the conventional, industrial high school paradigm defined the vast majority of American high schools for the next sixty years, despite a series of attacks both from those who wanted to implement a Committee of Ten style of core curriculum and those who wanted to reduce or dismantle the authoritarian structure and the tracked curriculum and classes of the high school. The only major innovation in the social structure of high schools came in the 1960s when many states acted to compel or induce small town and rural schools to band together and create "union" or "unified" high schools that were much larger in student enrollment. Life in high schools was also affected considerably by racial integration, although the enactment of racial integration had almost no effect on the conventional paradigm of high school. Harsh criticism, conflict, and controversy engulfed the high school in every decade from the 1950s on, yet the fundamental paradigm of the high school was largely immune both to significant reform and to transformation.

In 1945 Charles Prosser argued that 60 percent of high school students did not need either an academic, college preparatory curriculum or an explicitly vocational curriculum (Boyer 1983). He and others used the term "life adjustment education" to include a curriculum focused on citizenship, home and family life, use of leisure, health, tools for learning, and occupational adjustment. Prosser expected only 20 percent of high school students to go to college, with another 20 percent training for vocations. In a pamphlet he wrote for the U.S. Office of Education, Francis Rummel (1950) explained the life adjustment approach to high school: "Most boys and girls are headed for jobs that require little training. These youth need and want an invigorated general education that relates to their everyday lives."

The life adjustment model was strongly reminiscent of some elements in the *Cardinal Principles of Secondary Education* from the 1918 report of the Committee on the Reorganization of Secondary Education. Life adjustment was promoted by the U.S. Office of Education and by some prominent educators, but it is not evident that the life adjustment

movement changed the realities of the high school curriculum and structure very much. Cubberly's vision of differentiation of curriculum within an authoritarian environment had already triumphed. In this view, nearly universal enrollment in high school demanded tracking of students based on their perceived intelligence and/or ability. So high schools had a college prep track (obviously Prosser was dramatically wrong with his estimate of college attendance), a general track for students with undefined interests who seemed to lack college potential, and vocational and commercial tracks, that is, trade skills for boys and secretarial preparation for girls.

The life adjustment campaign and rhetoric did induce its inevitable opposition, for the history of the twentieth century is the story of continual intellectual and political conflict among three incompatible views of the desired mission and function of American high schools: the Cubberly view, the Dewey view, and the Committee of Ten view. The most prominent critics of life adjustment were Arthur Bestor Jr. and Admiral Hyman Rickover, although many other voices of critique joined the national dialogue. As early as 1946 the *Detroit Free Press* ran a series of articles asking, "Are our schools failing in their job of preparing youth to earn a living in business and industry?" Bestor argued that education should focus on intellectual training, that school should teach young people to think, and that schools should concentrate on the traditional academic and scientific subjects. Bestor also believed that all students should study the same core curriculum. The controversy about the purpose and function of high school raged on through the 1950s with new intensity, fueled by the larger national feelings of fear and insecurity induced by the Cold War. But for the most part the controversy did not change practices in the schools themselves.

In October 1957 the Soviet Union launched the first artificial satellite, Sputnik, and a shocked and fearful American public looked for someone to blame. While a reasonable response might have been to lay the responsibility for the failures of the American rocket program to that date on the rocket scientists and military leaders who were actually running the program, waves of criticism were directed instead at the public schools, and particularly the high schools. It is an old American tradition in times of social upheaval and anxiety to blame

the schools first, as evidenced not only by the Sputnik panic but also by criticism of the intelligence of American soldiers prior to World War II and the anxiety about the decline in American economic dominance in the early 1980s that set the stage for *A Nation at Risk*, yet another report in a very long line of reports that described the failure of American schools (Gardner et al. 1983).

In the post-Sputnik frenzy Bestor and Rickover argued again that high schools needed to be re-focused on academics, and particularly on a core academic curriculum (Bestor 1985, Rickover 1963). Rickover lauded the European model of separate secondary schools for different classes of students. He argued that the comprehensive high school by design was at the root of the problem, because in its effort to serve all students, it failed to give adequate attention and resources to the needs and capabilities of the most able and gifted.

In 1959 James Bryant Conant—a renowned scientist, former president of Harvard University, and the former high commissioner and ambassador to West Germany—issued a report, *The American High School Today*, that took center stage in the nation's discourse about high schools. Contrary to Rickover, Conant reaffirmed the value of comprehensive high schools as emblematic of American devotion to the equality of our citizens. Conant argued that because the United States was different from the western European nations in our history and our commitment to equality of opportunity for all citizens, it was contrary to our values to send young people to separate schools. Conant maintained that comprehensive high schools could fulfill three key functions simultaneously: nurture a sense among young people that they belonged to the same American community, thus creating a common national identity and loyalty and ensuring positive social relations between diverse groups; offer a program of classes to those who were not college bound that would prepare them for adult work and social life; and provide challenging academic classes, particularly in math, science, and foreign languages, for those with intellectual gifts and talents (Conant 1959a).

What became known as the "Conant report" took center stage in the public debate and took attention away from Rickover and his allies. Conant had twenty-one detailed recommendations and one "top priority" in his report. The most significant recom-

mentations called for the elimination of tracking entirely and its replacement with subject-by-subject ability grouping, a strong focus on English composition for all students, an extension of the role of high school counselors so they could guide individual students toward appropriate classes, and special support and/or classes for the most academically gifted students.

Conant's recommendations did have some impact on high school programs but certainly not any kind of significant effect. The industrial paradigm of high school endured. Even when schools adopted ability grouping, it was usually shaped by mathematics placement. Due to scheduling limitations, math placement usually led once again to tracking. Tracking meant that many students in different tracks encountered each other only in gym, at lunch, and in meaningless homerooms, and they were more likely to experience alienation from or conflict with students from different tracks than to join together to forge a common bond. Conant's idealistic claims ignored the fact that the tracking system in most comprehensive high schools had outcomes that were not so different from those achieved by separate schools in European nations.

Conant's top priority was the elimination of small high schools. Conant argued, "I should like to record at this point my conviction that in many states the number one problem is the elimination of the small high school by district reorganization." Larger high schools were needed, according to Conant, so schools could offer a diversified and comprehensive curriculum at an affordable price. For example, small high schools, with graduating classes of less than a hundred students, usually could not afford to offer four years (or three years in senior highs, with the first year in ninth grade) of mathematics, science, and world languages. Only about 25 percent of students could profit from a fourth year in these subjects, according to Conant, and only larger schools would have enough students to afford them. In addition only larger schools could afford the teachers and equipment for nonacademic elective programs, such as vocational courses. "A small high school cannot by its very nature offer a comprehensive curriculum," Conant concluded. While Conant cited one hundred seniors as the bare minimum required, he offered California, where high school graduating classes already averaged 291 students by 1956, as the model of what should be (Conant 1959a). Ironically what Conant cited as the absolute

minimum in size from his perspective, one hundred students in each grade, was cited forty-two years later by the Gates Foundation as the largest acceptable size for a small, personalized high school.

The movement toward high school consolidation had begun prior to the publication of Conant's report in states such as California and New York, where state education officials had used an array of sticks and some carrots to entice local leaders or eventually compel them to create unified high schools districts. Indeed Conant himself had contributed "untiring missionary work" to this campaign for more than a year prior to the release of his report. Conant's effort, fueled by his personal prestige and his access to political leaders and the media, transformed high school consolidation into a nationwide movement, particularly in the wake of the Sputnik crisis. Conant focused much of his attention on science and mathematics, and these two subjects lay at the heart of the anxiety about American education and its putative failures in 1959.

In 1958 there were about four thousand American high schools with graduating classes of more than one hundred students and 17,000 with graduating classes of less than one hundred. By 1990 there were about eight thousand high schools with graduating classes of less than one hundred students and 12,000 high schools with graduating classes of more than one hundred students. Moreover 89 percent of the students were enrolled in the larger high schools by Conant's definition, with more than one hundred students in the graduating class. Indeed 72 percent of students were in high schools with more than eight hundred students. Most of this transformation took place prior to 1975. For example, in the late 1960s even rural states such as Vermont and North Dakota, despite widespread and intense local resistance, managed to convert the vast majority of high schools into the Conant mold.

What actually resulted from the high school consolidation movement of the 1950s and 1960s was the intensification of quite a different social phenomenon than the one Conant had in mind. This phenomenon was a youth culture, defined in large part by its profound alienation from adult society. Large, increasingly impersonal high schools did not create this youth culture, but they powerfully supported its growth.

In 1900 barely 10 percent of the fourteen to seventeen year-olds were enrolled in school. Most of

the rest were working on farms, in factories, and in family businesses. Many worked long hours in what today would be characterized as abusive conditions. Nonetheless there was no youth culture, because youth were profoundly integrated into adult society. In the next five decades school enrollment in this age group exploded from the atypical to the norm: to 31 percent in 1920, 50 percent in 1930, 73 percent in 1940, 76 percent in 1950, and 87 percent in 1960.

The youth culture actually started in the 1920s, when a relatively small number of affluent white youths began to appropriate African American music, jazz, and slang and to use drugs, both alcohol and marijuana. The key technological innovations that fostered this culture were the automobile and the radio. For the first time teens could easily get away from their folks. This culture grew minimally through the 1930s and 1940s, with its focus on music (Benny Goodman and Frank Sinatra both started their careers as objects of youth veneration whose music was castigated by adults of their day), dances, slang, and clothing styles. However, its growth was severely limited by the crises of the Depression and World War II, both of which acted to engage young people in adult society.

Mass youth culture was born in the 1950s and exploded in the following decade. Four major changes in society joined together to propagate this phenomenon. One was urbanization and the increased social mobility that it represented. In 1900 only 39 percent of Americans lived in urban areas; 61 percent lived in rural areas. By 1930 the migration to the city was on, and 56 percent of the population lived in urban areas. By 1950, it was 64 percent; by 1970, it was 74 percent. Urbanization meant that many teens no longer grew up in communities where they had a set of consistent relationships with adults other than their parents through their involvement over time in communal institutions.

A second element of change resulted from the post-war prosperity and the widespread sense of "normalcy" after nearly twenty years of crisis, despite the tension of the Cold War and the terror of atomic weapons. In the 1950s the "American century" blossomed into unprecedented material prosperity, and young people in large numbers began to have spending money, which they could use to finance the various aspects of the emerging youth culture. This

money came from the growing wealth of the enlarging middle class, which came to young people both directly in the form of allowances and through affluent parents' capacity to let their children keep their earnings from after-school jobs, rather than requiring them to add these funds to the family pot as had previously been the norm.

A third element of change involved technology. In the 1950s automobile ownership expanded dramatically. The development of transistor radios gave young people their own cheap and private access to music. Within a few years of its introduction, television provided a national medium that connected all teens throughout the nation no matter where they lived. Elvis Presley jumped from a regionally known musician to a national phenomenon through a single appearance on the Ed Sullivan show. A few years later the Beatles leapt from rumored obscurity to center stage of the national culture through the very same mechanism.

By 1960, 87 percent of the fourteen to seventeen year-olds were enrolled in school. While the high schools of this time were for the most part embodiments of the conventional paradigm, most of them were small by current standards. And in small schools students tended to be known as individuals by their teachers and administrators. Small schools, even if repressive and boring, inevitably become some sort of community in which people enact relationships with each other over time.

What James Conant's high school consolidation movement tossed into this cultural mix was the destruction of the small high school and the dumping of millions of Baby Boom teens into larger, more impersonal schools where most young people passed through for three or four years without forming any significant relationships with any adults. This was the fourth generative element in the creation of the youth culture.

Conant's report quieted the critique of high schools by those who wanted a core, academic, traditional curriculum. All across the nation, state governments and, at times, local governments took Conant's recommendation on high school size to heart, and soon high school students were being bussed to much larger regional or union high schools in every state. By the early 1970s the normative experience of the majority of high school students everywhere would match that of students in large city schools, at least in terms

of the bureaucratic and impersonal qualities of their high school.

Soon after Sputnik the U.S. Congress responded to the Soviet success in rocket science by passing the *National Defense Education Act*, which supported additional high school instruction in science and mathematics. The National Science Foundation also received new funding to develop new, more rigorous curriculum for high school science. New courses in physics, chemistry, and biology were created, mostly by scientists based in universities, and these courses were adopted by a great number of high schools, with mixed success and very limited duration.

The 1960s, particularly after John Kennedy's assassination, was a time of enormous upheaval in American society. The civil rights movement, the war in Vietnam and the movement to end it, and the manifestation of a youth culture identified as a "counter-culture" all challenged the norms of American society. A few communities began to integrate schools voluntarily; many others were later compelled to do so by court orders at the end of the 1960s and in the 1970s. Much racial integration of schools began not with young children but with high schools. At times the integration of African Americans into previously white high schools took place peacefully. At other times there was disruption, hard feelings, and violence. But in most cases the paradigm of the high school remained intact. High schools were tracked, and the vast majority of students in the college prep track(s) were white. Most African Americans were placed in the general or vocational/commercial tracks.

During the latter half of the 1960s a good number of young African Americans identified with "Black power" or "Black nationalist" ideas and organizations. Black power activists in most cities rejected public schools as white-dominated and racist. Some started their own Black power schools or "freedom schools." Others sought to have African American leaders take control of public schools that served African American children. In the several years after 1966 there was much activity in African American neighborhoods in many cities in support of freedom schools. Then, at the end of the decade with the abrupt disappearance of the Black power movement came the simultaneous disappearance of these schools.

At the same time in the 1960s pedagogical progressives returned to the national stage for the first time in two decades. Books by teacher/authors such as Jonathan Kozol, John Holt, Herb Kohl, George Dennison, and James Herndon offered first-person critiques of the racism, classism, and mindlessness that were far too common in inner-city schools. While these books focused primarily on elementary schools, they nonetheless reached surprisingly large audiences and helped to create a climate both of antipathy toward the status quo in school and of advocacy for innovation. Books such as *Compulsory Mis-education* by Paul Goodman and *Coming of Age in America* by Edgar Z. Friedenberg focused on adolescent experience and found the lives of teens, including their school experience, to be fragmented, sterile, regimented, and often empty of the opportunity for critical thought. In *Crisis in the Classroom*, Charles Silberman chastised high schools for being "grim, joyless places . . . intellectually sterile and aesthetically barren," governed by "oppressive and petty . . . rules," where teachers unconsciously display contempt for their students.

In the late 1960s both reformers and radicals began to found schools that started on a continuum with the principles of the Dewey-influenced pedagogical progressives and moved toward ever more radical forms, perhaps finding the far end of this spectrum in A. S. Neill's model of Summerhill, a school where students fully directed their own learning (Neill 1960). Indeed the Summerhill model was embodied in the Sudbury Valley School near Boston. Certainly hundreds of schools and probably thousands were created in a few short years at the end of the decade, some called "alternative schools," many of which were within public school systems, and others called "free schools," which were almost always independent. Although both free schools and alternative schools never enrolled more than a small fraction of the nation's students, for several years in the late 1960s and early 1970s, they offered the prospect of the liberation of adolescents' interests, curiosity, passion, self-discipline, and idealism.

Yet just as suddenly as the freedom schools of African Americans disappeared, so did most of the free schools and alternative schools of white radicals and progressives. And the comprehensive high school remained largely as it had been before the storm of the late 1960s. Only the removal of some curricular

requirements and the addition of some greater number of electives to the high school curriculum indicated that anything had changed in the high school during the past decade, and these were both minor reforms. The industrial paradigm of the high school continued to reign.

Despite the quick exit of 1960s reforms and radicalism, there was a sense in the 1970s that order needed to be restored in public schools, that our schools needed to get “back to basics,” and that teachers could not be trusted and needed to be held accountable. This notion found its forms first in the back-to-basics movement and then in its complement, the minimum competency testing movement, which first was mandated by legislatures in California, Florida, Colorado, and Oregon in 1975. Within three years more than thirty states had adopted minimum competency testing. Most of these states required passing these tests as a requirement for high school graduation. Then most states set competency in basic skills, usually defined as reading and mathematics, at eighth grade levels, which raised questions about why eighth grade skills were adequate for high school graduation. Test administration raised many unanticipated issues. If you passed the tests, could you graduate from high school then? Did the students have a right to remediation if they failed a test? Who should articulate the basic skill standards? Who should set the passing score, and how should it be set?

Minimum competency tests had some arguably positive outcomes. They raised the issue of the need for greater alignment of curriculum among the grades as students progress through a school system. Failure rates were much higher for students of color than for white students, so the tests brought to the fore to some extent the issue of disproportional academic achievement. While the issue of racism and racist outcomes had been at the center of the debate in the 1960s, by 1975 the issue had faded from view, at least for educational leaders and policymakers, before its return with the disproportional scores on minimum competency tests. Regardless of these outcomes or of the putative accomplishment of the tests in introducing accountability to public schools, minimum competency tests were dismantled in the early 1980s as quickly as they had been established. By 1983 they were gone or on their way out in almost every state.

Even with all of the activity that minimum com-

petency tests created in schools, they had little or no effect on high schools. They were mostly set at an eighth grade level, so high schools could claim that the content and skills required for the tests had already been taught. To a great extent, only students in the general or vocational tracks failed these tests. When high schools did take up the work of remediation for failure, it was located in existing lower-level courses. So no changes were required in the structure of schools.

One longer-lasting change in high schools that did grow from events in the late 1960s and 1970s was the decline of the senior high school. In the 1960s the middle school movement started atop the failure of the junior high to serve the needs of early adolescents effectively. The most common middle school configuration was grades six to eight, and as middle schools began to spread across the nation during these years and into the 1980s, many high schools returned to a four-year configuration.

David Marshak

HIGH SCHOOL STRUCTURE AND CURRICULUM, 1983-2005

Ronald Reagan was elected president in 1980. His secretary of education, Ted Bell, appointed a commission that released a report in 1983 called *A Nation at Risk* (Gardner 1983). The report began:

If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war. As it stands, we have allowed this to happen to ourselves. We have even squandered the gains in student achievement made in the wake of the Sputnik challenge. Moreover, we have dismantled essential support systems which helped make those gains possible. We have, in effect, been committing an act of unthinking, unilateral educational disarmament.

Our society and its educational institutions seem to have lost sight of the basic purposes of schooling, and of the high expectations and disciplined effort needed to attain them. (Gardner 1983)

At a time when Americans feared that Japan and Germany might overtake them economically, *A Nation at Risk* struck a chord of anxiety in the nation's psyche despite its hysterical tone and overblown claims. Later on, Gerald Bracey, Iris Rotberg, Robert Huelskamp, and other analysts debunked many of its key assertions about school failure. But in 1983 the report ignited yet another crisis in American schooling, one which arguably continues to this day.

A Nation at Risk returned to the key ideas of the Committee of Ten: that all high school students should complete the same academically focused curriculum, and that the conventional academic subjects—English, science, mathematics, social studies, and foreign language—were more important than any other subjects. The report argued that every high school student should complete four years of English, three years each of math, science, and social studies, one-half year of computer science, with two years of foreign language for college bound students. Most states responded to these recommendations by raising graduation requirements toward this level of course completion, although only a few states followed the recommendations to the letter.

Many high schools also increased the number of advanced placement (AP) courses that they offered, and both the number of students enrolled in AP courses throughout the nation and the number of students earning college credit through AP exams began a large expansion over twenty years. These efforts were the core of what became known in the 1980s as the “excellence movement,” which also included initial actions by some states to implement standardized testing and raise the bar for initial teacher licensure and license renewal.

Soon after the publication of *A Nation at Risk*, three major educational figures published more complex, systemic, and nuanced critiques of American high schools. First, Ernest Boyer in *High School: A Report on Secondary Education in America* called comprehensive high schools a “troubled institution” (1983). But he did not want to abandon or transform the comprehensive high school; he wanted to fix it, and his remedy focused on mandating more academic coursework for all students.

Next, John Goodlad in *A Place Called School* (1984) provided a detailed critique of the ways that tracking limited the access of those youths in the general track to challenging curriculum, higher level

skills, and ultimately to college education. Goodlad explained that students of color and students from low-income families were disproportionately steered into the general track or what remained of the vocational/commercial track, which had been losing status and courses for several decades. Goodlad argued that a remedy for this discrimination lay in the creation of heterogeneously grouped classes within “a common core of studies” so all students would be guaranteed access to the same quality of learning.

Jeannie Oakes (1985), who had worked with Goodlad and had also conducted her own extensive study of tracking in high school and had detailed its racist and classist effects, and others such as Anne Wheelock (1992) took up the cause of “detracking” high schools in the late 1980s and 1990s. Some number of comprehensive high schools accepted the challenge of detracking, and a few, after significant labor on the part of their teachers to develop far more complex teaching skills to achieve differentiated instruction, achieved dramatically more equitable results at a high level of academic achievement. At the same time some unknowable number of high schools detracked in ways that lacked rigor and that alienated previously college prep track students and their parents.

Undoubtedly the vast majority of high schools, noted to be 86 percent by one study, did neither; they stood pat in the administrative progressives' paradigm of the 1920s. Even so the detracking movement soon bred a countermovement, led by some teachers of mathematics (who had perhaps the most difficult task in attempting detracking and thus who came more quickly to see the effort as either not worth the energy or not possible) and by some parents of high achieving students who had been in college prep tracks. In 1999 Tom Loveless of the no-longer-liberal Brookings Institution published a book, *The Tracking Wars: State Reform Meets School Policy*, that gave a stronger voice and better arguments to those who opposed detracking. With all of the noise and fury in both the educational and the mainstream media about tracking and detracking, the larger truth is that the detracking movement never gained critical mass to challenge the industrial paradigm of high school, which depended on differentiated tracks. This movement failed to offer an adequately systemic critique of the industrial paradigm of the high school. It never challenged class sizes of twenty-six or thirty

or thirty-three students or even more, five or six classes at a time taken by students, separate subjects, a teacher load of 150 students or more, and all the other structural and functional elements of the paradigm. In some places, the detracking movement did align itself with the block period movement, discussed below, but this common cause was never widespread enough to have a systemic impact on large numbers of high schools. And the conventional, industrial paradigm of high school makes successful detracking—where the “low level students” gain significantly from heterogeneous grouping by being removed from “dummy classes,” the “middle level students” gain some from more expert, differentiated instruction, and the “high level students” at least don’t lose anything academically and may gain from more diverse student colleagues—very difficult because it requires a deep and abiding commitment to the process, a very high level of curriculum development and teaching skills, and an enormous amount of teacher work.

While the detracking movement offered a weak challenge to the industrial paradigm of high school, none of the actions on the part of state-based political and educational leaders challenged the now sixty-plus-year-old high school paradigm at all. In contrast, TedSizer—the third educational leader to weigh in on the problem at this historical moment—and his colleagues had a new idea about the future course of the American high school (Sizer 1984, 1997). Sizer, a former dean of the Harvard Graduate School of Education and headmaster of the Phillips Andover Academy, had spent the previous nine years as a high school leader and teacher, thus making him one of the very few policy leaders in the United States with recent, significant experience in schools. He conducted a study of American high schools in the early 1980s, and the findings of his research team were published in several volumes, including *Horace’s Compromise: The Dilemma of the American High School* (1984/1997) and *The Shopping Mall High School: Winners and Losers in the Educational Marketplace* (Powell, Farrar, and Cohen 1985).

Sizer and his colleagues found that high schools were functioning much like shopping malls, without a coherent or challenging curriculum for most students. Most students never gained a depth of knowledge in any subject or mastery of particular intellectual skills. “The shopping mall high school is

thus profoundly neutral about mastery,” they found. “No one opposes it, but few (teachers) require or expect it” (Powell, Farrar, and Cohen 1985).

They also discovered that most teachers lived busy lives in schools in which they were isolated from each other and often distracted or even consumed by tasks that were largely irrelevant to their supposed purposes for teaching. At the same time, most students passed through their high school years without being engaged intellectually in their studies and without being known personally by any adult. Students mostly listened to the teacher talk, took notes, answered questions, and took tests. Most complied with authority, but many did as little as possible, and “high school students and teachers generally settle for mediocrity. Most classwork is modestly demanding of energy, minimally demanding of intellect, and utterly lacking in flair” (Powell, Farrar, and Cohen 1985).

The new idea of Sizer and his colleagues was to assert one part of Arthur Bestor’s “common curriculum” idea as the central purpose for high school but to wed it to many of the practices of the pedagogical progressives in the high schools of the Eight Year Study. With this formulation Sizer offered a new synthesis. Bestor argued that education should focus on intellectual training, that school should teach young people to think. Sizer, in the first of nine “common principles,” said that “the school should focus on helping young people learn to use their minds well. Schools should not be ‘comprehensive’ if such a claim is made at the expense of the school’s central intellectual purpose.”

At that point, though, Sizer diverged from Bestor and Eliot’s Committee of Ten in that he downplayed the organizing role of the traditional academic subjects, as described in his second principle:

The school’s goals should be simple: that each student master a limited number of essential skills and areas of knowledge. While these skills and areas will, to varying degrees, reflect the traditional academic disciplines, the program’s design should be shaped by the intellectual and imaginative powers and competencies that the students need, rather than by “subjects” as conventionally defined. The aphorism “less is more” should dominate: curricular decisions should be guided by the aim of thorough student mastery and achievement rather than by an effort to merely cover content. (Sizer 1997, 154)

Sizer focused on mastery and argued that less is more, or that simply covering a subject in class was worthless unless students actually gained understanding and developed skills. He embraced another element of the Committee of Ten's and Bestor's position in the first part of his third principle, although he acknowledged the need for diversity in teaching and learning strategies to achieve these goals: The school's goals should apply to all students, while the means to these goals will vary as those students themselves vary (Sizer 1984, 1997).

Sizer's other "common principles" included the following:

- Teaching and learning should be personalized to the maximum feasible extent. Efforts should be directed toward a goal that no teacher have direct responsibility for more than eighty students in the high school.
- The governing practical metaphor of the school should be student-as-worker, rather than the more familiar metaphor of teacher-as-deliverer-of-instructional-services.
- Teaching and learning should be documented and assessed with tools based on student performance of real tasks. Students not yet at appropriate levels of competence should be provided intensive support and resources to assist them quickly to meet those standards. Multiple forms of evidence, ranging from ongoing observation of the learner to completion of specific projects, should be used to better understand the learner's strengths and needs, and to plan for further assistance.
- The tone of the school should explicitly and self-consciously stress values of unanxious expectation ("I won't threaten you but I expect much of you"), of trust (until abused) and of decency (the values of fairness, generosity, and tolerance).
- The principal and teachers should perceive themselves as generalists first (teachers and scholars in general education) and specialists second (experts in but one particular discipline). Staff should expect multiple obligations (teacher-counselor-manager) and a sense of commitment to the entire school.
- Ultimate administrative and budget targets should include, in addition to total student loads per teacher of eighty or fewer pupils in the high school, substantial time for collective planning

by teachers, competitive salaries for staff, and an ultimate per-pupil cost not to exceed that at traditional schools by more than 10 percent (Sizer 1984, 1997).

The focus on personalization of learning, on multiple pathways for learning, on essential skills and depth of knowledge, and on student performance of "real tasks" linked Sizer's model to pedagogical progressive schools of the Eight Year Study. So did the de-emphasizing of traditional subjects in favor of the intellectual and imaginative powers and competencies that the students need. Also, as did the Eight Year Study, Sizer provided no specific model of what the high school should be; instead he offered a set of principles and invited schools that adopted the principles to figure out how to manifest them in their own appropriate way.

In 1984 Sizer formed the Coalition of Essential Schools (CES) to support twelve schools in seven states that wanted to enact the common principles. Over time the CES became a network that linked schools across the nation that chose to make a commitment to embody the nine common principles in their school program. Throughout the late 1980s and 1990s, the CES grew slowly but steadily, gradually extending into a majority of the states. CES schools were often criticized for not raising their students' standardized test scores in any dramatic way. In response CES school leaders explained that raising test scores was not their focus, because most standardized tests failed to measure the kinds of analytic and expressive skills and the depths of knowledge and understanding that were the outcomes of CES schools (CES National Web, 2004).

Eventually the Coalition of Essential Schools found new leadership when Sizer retired. It also adopted a tenth principle, which aligned it even more firmly with the tradition of pedagogical progressives:

The school should demonstrate nondiscriminatory and inclusive policies, practices, and pedagogies. It should model democratic practices that involve all who are directly affected by the school. The school should honor diversity and build on the strength of its communities, deliberately and explicitly challenging all forms of inequity.

By 2004 the CES included about six hundred schools throughout the nation and claimed that more than

80 percent of its high schools' students entered college compared to 63 percent overall, more than 82 percent of its African American graduates compared to 59 percent of African Americans graduates overall, and more than 87 percent of its Latino graduates compared to 42 percent of Latino graduates overall. CES high schools had an average student body of 388, and they reported a crime rate less than one-third the rate at conventional high schools.

In 1989 the first President Bush called all fifty state governors to a gathering in Virginia, and afterward the excellence movement morphed into the standards and testing movement. With nearly universal, bipartisan support from elected leaders, including Republican governors such as Lamar Alexander and Democratic governors such as Bill Clinton and Richard Riley, and from influential corporate leaders such as Louis Gerstner from IBM and Frank Shrontz from Boeing, the standards movement was adopted by forty-nine states by the mid-1990s. Each state wrote its own grade level curriculum standards, which varied from fact-based compendiums in some states to primarily concepts and skills in others. And each state then developed its own system of testing, in theory to be based on its own standards, although some states struggled to enact this relationship in their test development. By 2003 twenty-five states had implemented or were soon to implement high-stakes tests in high school for high school graduation. Only Nebraska completely resisted the powerful momentum of the standards movement.

In a way, the standards movement marked a return to the Committee of Ten's idea that all students should study the same core subjects in the same way in high school. Forty-nine states set the same high school curriculum for all students. Twenty-five states demanded that all students pass the same set of tests if they wished to receive a high school diploma. Yet as the standards movement was enacted during the 1990s, high school graduation rates declined in forty-three states. And the political leaders who brought forth the standards movement, and most of the educational leaders who enacted it, had almost nothing to say about the paradigm of American schools overall, or about the industrial paradigm of the comprehensive high school in particular. It seems that somehow they expected curriculum standards and tests to accomplish by themselves what the tracked, comprehensive high school had never before accomplished.

In the 1990s while the standards movement, which

came almost exclusively from outside of schools, was gaining political momentum and then moving into law and implementation, teaching, and testing, an entirely different kind of movement rose up within high schools from teachers and principals themselves. This was a movement from periods of less than an hour, which had been codified by Charles Eliot in 1893, to periods of 75 or 90 or 100 or even 110 minutes, labeled block periods. Several block period experiments had begun in the 1980s after *A Nation at Risk*, including the so-called Copernican Plan, which integrated both block and regular periods. But early in the 1990s the adoption of block period schedules took off. In southern states with large countywide districts, much of the implementation was imposed on high school faculties by superintendents. But elsewhere in the nation almost all block period adoption took place through the agreement of the majority of teachers in a given school to try out this new schedule, with the innovation led by teachers or the principal or, in some cases, both.

While there was no firm data on the number of block period adoptions that took place, some observers claimed that as many as 40 percent or perhaps even more of American high schools had implemented some form of block period schedules. The two most popular block period formats were called the A/B schedule and the four-period day. The former kept the common six-period schedule, doubled the length of each period, and had classes meet every other day (this was the easier adoption, since it only changed the length of the period, nothing else). A variant was the A/B/C plan, which kept one day with all six short periods and four days with block periods and classes every other day.

The four-period day restructured the school day into four periods of ninety minutes each, with students taking four classes and teachers teaching three classes each semester. Courses became one semester in length. While the four-period day began to change the high school structure in some significant ways (student load of only ninety at a time, a ninety-minute planning period every day for teachers and three classes as the typical load), it offered its own set of problems, particularly for those who sought to maintain the range of choices available in the comprehensive high school. With courses completed in a semester, such as all of Math 10 or French I, scheduling subjects that demanded a sequence, primarily math, world languages, and music, was problematic. Would a student take Math 9 in the first semester

of ninth grade and Math 10 in the second semester of tenth grade? Would it matter? Also, with only four periods available, music and art courses could be deprived of students, particularly of students from honors and college prep tracks.

One purpose for block periods was to allow and support teaching and learning activities that both increased student engagement and generated and nurtured heightened student initiative and responsibility. Another purpose was to promote in-depth study of topics as opposed to coverage. Longer periods gave time for group work, research, writing, discussion, and debate, all of which banished lecture from center stage and replaced it with student activity. When students experienced themselves as active learners in the block period classroom, they were more engaged, cared about their learning more, and created better academic products than when they were simply receivers of information.

When teachers used the block period well, they often provided their students with both increased independence from direct adult control and with increased responsibility. These teachers wanted more from their students: more engagement, more caring about learning, more effort, more willingness to be responsible, and more initiative. They offered students more choice, more control, more respect for students' interests and capabilities, more collaborative effort and common cause. And in some action research studies conducted by teachers (Marshak 1999), a significant majority of students accepted the new arrangements offered by their teachers and performed as learners at new, higher levels of engagement and initiative, accomplishment, and sophistication. These studies showed the potential of teaching focused on student engagement in block periods could begin to challenge some elements of the conventional high school paradigm.

On the whole, though, studies of block period learning outcomes have had inconsistent results. Some have shown positive outcomes; others have not, in particular studies that have measured only standardized test scores (ASCD 2004). Some teachers used the longer periods effectively and inventively; some did not. Teachers of mathematics, world languages, and music were overrepresented in the group of teachers who were opposed to block periods, while the majority of teachers from other subjects who had experienced block periods said that they wanted to

keep them. Students also had mixed feelings about block periods, depending directly on how much the teacher provided opportunities for students to be active and engaged—or passive and bored for a seemingly interminable 100 minutes.

Overall it seems that most of the schools that changed to a block period schedule have maintained that schedule as of 2004. The block period has chipped away some at the industrial paradigm of high school, but it has not overturned it.

The small high schools movement, which started most notably with Central Park East Secondary School in Manhattan, led by Deborah Meier, began in the mid-1980s and gathered some momentum in the 1990s, particularly in New York City, Chicago, and Philadelphia. In 1989 the Carnegie Foundation Council on Adolescent Development published a report called *Turning Points: Preparing Youth for the 21st Century* (Carnegie Council on Adolescent Development 1989). This report focused explicitly on middle schools, but one author (Marshak 1995) noted in *The High School Magazine* in 1995 that its proposals were a call to action for high school paradigm transformation from the large comprehensive high school to a new small schools model. The *Turning Points* report included, among others, the following recommendations:

- Create small communities for learning. (Subsequent research has shown that these learning communities work best when they are autonomous schools with their own identity, mission, leadership, staff, and budget.)
- Create experiences of success for all students.
- Eliminate tracking.
- Empower teachers—and related administrators—to make curricular and instructional decisions for their students.
- Employ teachers who are expert at teaching adolescents—and who value, like, and appreciate adolescents.
- Engage families in the education of their adolescent children.
- Re-connect high schools with their communities.

Most of the founders and leaders of these small high schools were pedagogical progressives, and they rejected Conant, Bestor, and Eliot; that is, they rejected both the concept of core curriculum for all and the comprehensive high school. They argued that effec-

tive education for adolescents started from personalization, from relationships between students and teachers and among students, and from establishing the school as a genuine community. They also maintained that for a faculty to work together and co-create a high school, it had to be small enough, as Meier wrote (Meier 2002), to sit around the table and have a conversation—no more than twenty people. Particularly for students who were likely to be alienated from or disaffected in conventional high schools, but actually for all adolescents, teachers who knew their students as individuals and who worked with them for more than one year were much better able to guide and support students towards high academic achievement. Many of the small high schools in New York City provided evidence in support of this contention in that their dropout rates were far lower than district norms and their college attendance rates were much higher.

The small high schools movement was largely aligned with the Coalition of Essential Schools in its values, and many small high schools formally joined the CES. However, this movement was transformed from a still relatively small collection of several hundred schools into a force that may yet transform the paradigm of American high schools when, beginning in 2001, the Bill and Melinda Gates Foundation selected “small high schools (ideally 400 students or fewer) that can provide a personalized learning environment where every student has an adult advocate” as its primary educational endeavor. Citing the 1990s research as had previous small high school advocates, the Gates Foundation’s educational director, Tom Vander Ark, noted that small high schools are much safer, students are more actively engaged in learning and in the life of the school, dropout rates are significantly lower, and more graduates go to college; small high schools are more able to educate students of color and students from low-income families who are more likely to drop out of conventional high schools.

Since 2001 the Gates Foundation has invested more than \$600 million to support 1,457 small high schools, some completely new schools and others involving conversions from large, conventional high schools. Vander Ark has said that the goal of the Gates Foundation is to transform the American high school (www.gatesfoundation.org 2004). The Foundation cites “a new 3 Rs” as central to high school success:

meaningful, supportive relationships, a relevant curriculum, and rigorous instruction. Small high schools provide an environment where significant relationships between students and teachers are possible. The existence of such relationships can help teachers to offer a curriculum that is relevant to students’ interests and concerns. Both of these elements link the Gates Foundation’s vision for high school to the notions of pedagogical progressives and of the Eight Year Study.

Rigorous instruction is the third key element. Historically, rigorous instruction has been linked most often to core curriculum advocates. Eliot and the Committee of Ten as well as Bestor and Rickover called for the equivalent of rigorous instruction. The comprehensive high school has usually provided rigorous instruction only to those in the top track(s). In contrast, pedagogical progressives have often been criticized for eschewing rigorous instruction. Clearly some have done so, but a careful examination of the Eight Year Study and of CES publications gives many examples of deep, complex, and meaningful learning—and instruction that is far more student-centered than the conventional paradigm’s instruction (which is highly teacher-centered). This instruction is nonetheless rigorous, though sometimes in unconventional ways. These documents show that intellectual rigor can be a key element of the learning and teaching in pedagogically progressive high schools where teachers value rigor.

The Gates Foundation’s program draws directly from the small high schools movement and is deeply aligned with the values of the Coalition of Essential Schools. A document on the foundation’s website lists the “essential components of teaching and learning” as active inquiry, in-depth learning, and performance assessment, which are all included in the common principles of the CES. While the foundation has focused on “smallness” as a necessary component of its high school paradigm (no more than 400 students in a school), it has funded schools based on three different organizing principles: conventional academic subjects with rigor, relationships, and a college orientation; theme-based schools, with a curriculum focused on a specific theme such as the arts, technology, or the environment; and highly individualized schools with a focus on projects and internships. Clearly the Gates Foundation’s initiative and enormous financial resources will give this new

paradigm of high school every opportunity to take hold in American communities.

In 2002 Congress passed and the second President Bush signed the *No Child Left Behind Act* (NCLB). While most of its impact was felt by elementary and middle schools, the act requires every student to take tests in reading and mathematics (by 2005/06) and in science (by 2006/07) at least once in the high school years. These test scores are subject to the rules of NCLB, which means that high school test scores must improve by the amount required in each state every year. If a school's test scores fail to improve in every single listed student category (e.g., low income, African American, special education) two years in a row, then the school is declared to be "needing improvement" and a host of penalties and punishments begin. It is not at all clear at this time how the NCLB program will affect high schools.

In 2004 the American Diploma Project released its report, *Ready or Not: Creating a High School Diploma that Counts* (American Diploma Project 2004). This project was the work of an unusual collaboration among the Education Trust (a civil rights nonprofit organization advocating for the needs of children of color and children from low-income families), Achieve (a nonprofit organization dedicated to promoting the standards and testing model of schooling), and the Thomas B. Fordham Foundation (the institutional home of Chester Finn, perhaps the most effective conservative Republican in educational policy circles). *Ready or Not* argues that the "high wage, high growth" industries of the Information Age require highly skilled, college educated workers and thus high schools need to prepare all young people to attend and graduate from college. High schools should accomplish this goal by educating all students to meet the standards of what is now the honors track in conventional comprehensive high schools. Of course, *Ready or Not* is largely a return to the argument made by Eliot and the Committee of Ten in 1893, except that Eliot and his colleagues could never have imagined that their recommendations might one day be applied to all students, not just the small elite enrolled in high schools in their day.

Finally, schools in 2005 have not been so racially unbalanced since 1968 when a series of Supreme Court decisions moved school desegregation from promise to reality in a good number of school districts. School integration by race reached its high point in the late

1980s. Since then the United States has re-segregated to a significant extent, and most white, African American, and Latino students attend schools where they are in the racial or ethnic majority.

In 2005 enormous forces are arrayed to challenge the twentieth century industrial paradigm of the comprehensive high school. Will personalization and small schools become the new paradigm? Will the only high school curriculum become what is now the honors track? Will schools become increasingly segregated by race, ethnicity, and class? It is not at all clear what will happen next.

David Marshak

LEARNING AND TEACHING IN HIGH SCHOOL

The National Research Council cited three key components of effective learning in its 1999 report, titled *How People Learn: Bridging Research and Practice*:

1. Active inquiry: "Students are engaged in active participation, exploration, and research; activities draw out perceptions and develop understanding; students are encouraged to make decisions about their learning; and teachers utilize the diverse experiences of students to build effective learning experiences."
2. In-depth learning: "The focus is on competence, not coverage. Students struggle with complex problems, explore core concepts to develop deep understanding, and apply knowledge to real world contexts."
3. Performance assessment: "Clear expectations define what students should know and be able to do; students produce quality work products and present to real audiences; student work shows evidence of understanding, not just recall; assessment tasks allow students to exhibit higher-order thinking; and teachers and students set learning goals and monitor progress."

This is a description of learning that some educational psychologists call constructivism as opposed

to behaviorism. Some curriculum theorists call it transaction as opposed to transmission (Miller and Seller 1990). It is a description of learning that implicitly defines teaching as activities that promote active inquiry and in-depth learning and that employ the tools of performance assessment.

The industrial, conventional paradigm of high school has historically relied on behaviorism, or transmission, as its theory of learning. In this theory, knowledge exists outside of the learner, and the teacher's role is to move the knowledge into the learner's memory, at least long enough so that the learner can restate the knowledge on a test. To a significant extent the transmission theory encourages "teacher talk" in high school classrooms, either through direct lecture or through a form of whole class "discussion" in which teachers do ask some questions and elicit responses from students but actually devote the majority of classtime to their own comments. When teachers talk much or most of the time in class, at best students are actively listening. Much more often students are passive or disengaged.

Of course, this identification of the primary pedagogy in conventional paradigm high schools as teacher talk is a vast generalization to which many exceptions can be cited (for example, labs in science classes, working out problems in math classes, conducting library research in social studies classes, and engaging in skill practice, writing, or research on a computer). Nonetheless a variety of studies at different points during the twentieth century have confirmed that in conventional class periods of less than an hour, more than anything else, teachers talk and students are supposed to listen.

One reason for this pedagogical dominance is that constructivist or transactional teaching requires learners to be actively engaged in the process of gaining knowledge and building understanding. Active engagement means doing, not just listening: learners talking with each other and with the teacher, researching, writing, exploring, experimenting, making, debating, and so on. Active engagement requires time, because doing requires more time, and sometimes much more time, than listening to the teacher talk about a topic. Teacher talk is very efficient for covering the material. It is not as effective, though, if the goal is for students to learn. But if the teacher only has fifty minutes with students, the limitations of time often pres-

sure the teacher toward a transmission approach, both because there is so much curriculum to be covered and because the fifty-minute period makes it difficult or impossible to conduct many constructivist activities that require longer blocks of time.

Constructivist theory would not ban teacher talk, because such expression is obviously necessary in the classroom. Indeed, lecture can be a very useful instructional tool when it is used appropriately. But constructivists would reduce overall teacher talk significantly and remove lecture and teacher-centered "discussion" from the central pedagogical role in high schools.

Some critics have claimed that constructivists reject the need for students to learn facts, concepts, and skills (Rochester 2002). This is certainly not the case for constructivists whose theory and practice are grounded in the actual learning experience of adolescents in schools and elsewhere. This constructivist position requires a dialectic between the society and the individual learner, between transmission and transaction, between the artifacts of the culture and the learner's capacity for inquiry, meaning-making, and self-direction of learning. Thus, it is important for students to learn significant facts, concepts, and skills that are deemed to have value in the society. At the same time, the more that students are actively engaged, allowed and encouraged to develop deep understandings that relate to their own meaning-making about their lives, and involved in setting their own learning goals and monitoring their own progress, the more likely they are to be successful learners both in terms of transmission and transaction. Constructivist theory argues then that these qualities of learning are integral, not opposed, and that deep understanding results from the pursuit of this integrality. Each learner constructs her/his own knowledge and skill base, which inevitably contains elements that are common to many as well as those that are personal and unique.

One outcome of the introduction of block periods into conventional paradigm high schools in the 1990s was that a significant number of teachers (probably not a majority, although there are no convincing data on this question) were encouraged by the new expanse of time that they had in each period to incorporate more constructivist teaching methods into their repertoire. Many teachers in block peri-

ods let go of some or much teacher talk and employed more group work, projects, in-class research and writing, simulations, and so on. The simultaneous introduction of access to the Internet also encouraged these teachers to draw on a growing array of Internet-based learning activities.

It is not at all clear how much of this pedagogical shift has taken place in block period high schools, but it seems safe to say that block periods and their concomitant changes in teaching styles have not profoundly altered the conventional paradigm of high school. On the other hand, high schools that have fully integrated all ten of the Coalition of Essential Schools' common principles into their school structure and daily life are pioneering—or reinventing the pioneering of the pedagogical progressives from some of the Eight Year Study schools—a high school paradigm founded on constructivist theory. The CES principles embrace constructivism, as does the small high school model propounded by the Gates Foundation, which cites *How People Learn* from the National Research Council as one of its foundational sources.

David Marshak

ASSESSMENT IN HIGH SCHOOL AT THE START OF THE TWENTY- FIRST CENTURY

Assessment in the context of education can be defined in terms of both process and purpose. The process of educational assessment is that of gathering evidence and making inferences from that evidence in order to address a variety of needs. Different needs come from different stakeholders in education. Students, for example, need to know how they are progressing and what to do next as they build their understanding of how to write a persuasive essay. Teachers need to know whether a set of lessons on the relationship between percents and fractions was successful. Parents need feedback on how their child is doing academically in the difficult transition from middle to high school. Principals, district administrators, legislators, and the citizenry in general may all have various reasons to engage in or make use of

the results of educational assessment. Accordingly, educational assessment can take many forms. The primary concern in this discussion is to address classroom-based assessment in the high school.

The purpose of assessment in this context is to find out what students know, what they understand, what they can do, and what are their attitudes and inclinations with regard to an educational objective. Teachers do not have direct access to these data. They cannot be measured directly the way we measure the volume of liquid in a vessel or money in a bank account. Instead, teachers must observe students' actions and deduce where students are in the journey toward a desired objective. The purpose of educational assessment, then, is to use external indicators to make inferences about an internal state.

Assessment must be distinguished from evaluation. Consistent with the general statement made above, classroom-based assessment is defined as the process of gathering evidence about a student's knowledge of, ability to use, and disposition toward the area under study; it is also the process of making inferences from that evidence for a variety of purposes. Evaluation is defined as the process of determining the worth of, or assigning a value to, something on the basis of careful examination and judgment. Evaluation, therefore, is one of the uses of assessment information.

In current and ongoing efforts to reform education, a good deal of attention is given to the role of classroom-based assessment. This has not always been the case. Lorrie Shepard (2000) has pointed out that in previous volumes of the *Handbook of Research on Teaching*, there was no specific chapter on classroom-based assessment. Preservice teachers in traditional courses on educational measurement learned about deciles, test item formats, and the use of the bell curve to understand the distribution of test scores. These concepts served the needs of the psychometrician seeking to understand the results of large-scale external assessments, but were of little use for the classroom teacher. Likewise, few connections were made to the role of assessment in courses on methods of teaching. As a result, many high school teachers subscribe to the "teach, test, and hope for the best" school of assessment in which tests are created by the teacher at the end of a unit. These tests tend to emphasize low-level knowledge and function as a means of evaluation and the assignment of grades.

This approach to assessment is consistent with a view of learning that was prominent throughout most of the twentieth century. For example, the 1960 edition of the *Encyclopedia of Educational Research* emphasized behaviorism as the dominant conception of how learning took place. For the behaviorist, learning is seen as the accumulation of stimulus-response associations and the learner is seen as more or less passive. Things are done to the learner and the results are evaluated through the examination of test data. Testing, often identified as “scientific measurement,” was performed after instruction in order to evaluate its effectiveness.

At present, constructivism has replaced behaviorism as the dominant conception of the process of learning, at least in the conceptual frameworks of most educational psychologists. Constructivism emphasizes the active role of the learner in the process of building understanding and acknowledges the importance of both the learner’s background and the social environment in which the learning occurs. Ernst von Glasersfeld (1990) states “Knowledge is not passively received either through the senses or by way of communication. Knowledge is actively built up by the cognizing subject.” In this constructive process the learner is constantly interacting with the perceived environment in which the learning takes place. Feedback that alerts the learner as to the success of his or her learning keeps the learner on a more direct route to the learning goal. Thus, while testing served as a periodic evaluation of the degree of progress made, assessment addresses the learner’s need for more frequent interaction with the environment, guiding the active learner to make judgments about his or her own learning. Assessment, as opposed to testing and evaluation, has assumed a more important role in the processes of teaching and learning.

The culture of school has a great deal of momentum and changes very slowly. The “teach, test, and hope for the best” approach in which evaluation is emphasized and where assessment is mostly confined to quizzes and end-of-chapter or unit tests is still the norm. That culture is shifting, however, as may be inferred from the attention given to assessment at educational conferences and in the discipline-specific journals used by teachers. As this change takes hold, other parts of the curriculum puzzle are shifting in response. In a recent book that has received a good deal of attention, G. Wiggins and J. McTighe (1999)

proposed the “backward” model for curriculum design. Typical curriculum design begins with the determination of learning targets, proceeds to specification of the instructional activities, and confines assessment to a test. The purpose of the test is generally to evaluate the learning and to serve the need to rank order the students at the end of the unit. Backward design also begins with the learning targets but then proceeds directly to the assessment. The question is “What would a successful student know, be able to do, and so on?” Once this question has been answered and the appropriate assessment has been determined, the instructional activities are designed with these ends in mind. Assessment shifts from an afterthought to a driver in the teaching process. Along the same lines, teachers are gradually coming to realize that assessment can be used more flexibly in order to serve the day-to-day needs of students and teachers.

It has been argued that the current drive to implement an ever-expanding battery of standardized tests has been detrimental to this evolution of teachers’ conception of assessment. If assessment is closely identified with tests imposed by external authorities, and used to judge teachers as well as students, attention to the development of a more productive understanding of classroom-based assessment may suffer.

It is important to understand some of the terminology used in the field of classroom-based assessment. Assessment may be classed as formative or summative, informal or formal, and authentic or decontextualized. First, formative assessment is that which serves the purpose of modifying instruction. A teacher who gives a pop quiz in order to find out whether students have grasped the highlights of an interactive discussion or who, near the end of class, asks students to write a paragraph summarizing what they know and what they still wonder about the subject of the day’s lesson may be engaged in formative assessment. The results of the assessment will be used to make decisions about pedagogical next steps. Summative assessment is more akin to evaluation in that the results of the learning process are being summed up. The purpose of summative assessment is to measure the degree to which students have achieved the learning objectives. The test at the end of the chapter and the final exam are examples of summative assessments. Of course summative assess-

ments may yield information that can be used for formative purposes. The difference between the two is primarily a matter of the intent of the assessor.

Assessment can also be identified as either formal or informal. Formal assessment is characterized by the fact that there is a cessation of instruction in order to accomplish the assessment. There is an hour set aside on Friday for the unit test. Learning stops, and it's time to find out what was learned. Formal assessment is often summative. Informal assessment more often takes place as part of the learning process. The teacher, in order to give the students a chance to draw together their understanding of the process, may ask students working in a small group to explain their reasoning. As may be inferred from these examples, formal evaluation is often though not necessarily summative while informal assessment is more often formative.

Authentic assessment differs from decontextualized assessment in that the tasks used in an authentic assessment are more like those that would occur in the context the learning is meant to serve. For example, if a teacher wants to use authentic assessment to find out whether students understand division of two-digit numbers, she might observe students in a setting where division will enable students to solve a perceived problem. The decontextualized version of this process is, as the name implies, one in which the context has been stripped from the task. Students may be presented with a set of two-digit numbers and asked to find their quotients. The information obtained in these two settings is quite different. Good teachers use these techniques according to the assessment needs of their students.

The process of assessment can take many forms. The following sequence of steps is illustrative of the general pattern. The first step is the determination of the desired outcomes or learning targets. Learning targets are statements about what students must know and understand, about skills they must develop, and about attitudes and inclinations that are important in the area under study and that are to be cultivated in students. The teacher must have a clear understanding of these targets and must be able to convey them to the students and, sometimes, to external stakeholders such as parents, principals, and colleagues. The next step is the specification of evidence. Teachers must be able to describe student actions that will convince the teacher that the learning target has been achieved.

The required evidence may be as simple as a specified score on a multiple-choice test, or it may be an extended description of actions to be observed in a performance or a written report. Evidence may be expressed in the form of an assessment rubric or scoring guide that specifies evaluative criteria, quality definitions, and a scoring strategy. Having devised learning targets and specified the desired evidence, the teacher must give the students a chance to provide that evidence. This third step is the design and administration of the assessment itself. An assessment may be formal and summative as with a term paper or an oral exam scored according to specified criteria (evidence), or it may be informal and formative as with a class discussion that gives the teacher a clearer picture of the group's abilities and inclinations and provides direction for tomorrow's activities. Regardless of the exact nature of the assessment, the outcome is information about the degree to which students have met the learning targets. The final step is the interpretation of these data and the determination of subsequent action to be taken.

Mark Roddy

CONFUSION OF PURPOSE, LACK OF RESPECT: THE HIGH SCHOOL DILEMMA

Some writers claim that the comprehensive high school of the twentieth century has failed. Since the high school's role is central to the development of the American culture and economy in these years, claiming failure for the high school would require a simultaneous claim of failure for the entire American society. Clearly such a claim has no merit.

The twentieth-century comprehensive high school has succeeded far beyond the expectations of the paradigm's founders, be they Eliot and the Committee of Ten or Cubberly and the administrative progressives. It has educated most of the population in ways that prepared them for higher education or the workplace at least somewhat well. And for the most part it has provided a safe place for adolescents to spend their days, particularly since as the century

unfolded, there were fewer and fewer locations where adolescents were allowed to be during the daytime.

However, it is also evident that the industrial paradigm comprehensive high school has not fulfilled some of the most important promises that its advocates have made in its name. Institutional racism and classism abound, as does anonymity. Most teens are cast adrift from the adults who teach them, even though they encounter each other every day, and most teens live in a peer society bereft of adequate adult influence. Some conventionally talented students are not adequately challenged. Many talented young people from communities of color do not find their talents recognized and nurtured. Very few young people learn how to act as citizens in a democracy because most comprehensive high schools have no meaningful democratic contexts.

Some political leaders and economists, noting the advent of the Information Age and the intensifying removal of manufacturing from the United States by American and other corporations, argue that high school must equip all young people to succeed in college, because in the future only those jobs that require college-level skills and knowledge will pay enough to support a family. Other political leaders and economists counter that the American economy continues to generate increasing numbers of service industry jobs that are not high skill; such jobs, however, only pay at levels that add more people to the ranks of the working poor. These leaders and economists maintain that the economic problem is not educational but political. Since 1981, federal and state government policies have transferred wealth from the middle class and working class to the upper class and have acted in multiple ways to lower the income in real dollars of those in low-skill service jobs.

Whichever version of events is more accurate, the comprehensive high school today certainly fails to prepare most students to be active, engaged, responsible citizens of a democracy, and it fails to prepare far too many students to succeed economically. The Coalition of Essential Schools' high school paradigm and some manifestations of the Gates Foundation's paradigm seek to remedy the former failure. No one else working in high school reform in 2005 seems interested in addressing this concern, including none of America's elected leaders.

The CES paradigm and the Gates Foundation's paradigm, which often but not always overlap, also

claim to respond to the need to prepare students to succeed economically, and they offer some data from the past fifteen years to support their claims. In contrast the standards and testing movement claims that it already has the answer for preparing young people to succeed economically. Standards and testing systems have been enacted into law in forty-nine states by Republicans and Democrats alike and are supported by a wide array of corporate leaders. Some states such as Massachusetts have publicized what its leaders call success with standards and high-stakes testing in which students must pass certain tests to earn a high school diploma, because the percentage of students passing the tests has increased to high levels. Yet as states enacted standards and testing in the 1990s, high-school graduation rates decreased in the forty-three states. Only time will tell if this trend is reversed during the current decade. So far no research has connected standards and testing in high school with any kind of positive outcomes later in life.

State-mandated tests, however, often reflect a transmission or behavioristic view of learning, placing a greater emphasis on the memorization and recall of data than on more constructivist orientations to knowledge, such as deep and complex understanding, personal interpretation and analysis, and creativity and problem solving. Some leaders in CES high schools in New York State and elsewhere have fought against state-mandated tests or sought exception from them, because they have argued that such tests fail to recognize and assess the high-level skills their students have developed in writing, problem solving, creative expression, and complex analysis. This conflict between high school paradigms once again raises the fundamental question for high schools that has endured since their first codification in 1893: What is the high school's purpose?

Finally, despite all of the enormous labor focused on high school change over the past twenty years, in one profound way the cultural meanings attributed to high school have not changed at all. To a significant and destructive degree, Americans do not seem to value high schools as places of learning:

- Looking at American newspapers, one would think that high schools exist primarily for athletic teams and test scores. There is almost no reporting on the phenomenology of learning and teaching.
- Television shows and movies that purport to show

high school life are almost never realistic in their portrayal; rather than learning and teaching, they focus on sex, violence, and sensationalism.

- On the rare occasion when media do focus on teaching and learning, they present only “teacher as superhero” stories, not realistic portrayals of excellent teachers who teach well.
- Many adults tend to romanticize high school by the time their own children arrive in one. The stress, the boredom, the competition, the anxiety are forgotten, and only the fond memories remain. Many parents tell their children to relax, that high school is the best four years of their lives.
- The majority of high school students work outside of school. While some work to help out their parents economically, most work for their own spending money. Some studies show that working less than eighteen or twenty hours a week correlates with higher grades in high school; beyond twenty hours, grades go down. In either case, adults often give their children

mixed messages when it comes to school and work. They say, “School is the most important thing,” and then they say, “If you want money for yourself, get a job.”

To paraphrase the words of a late American comedian, “High school doesn’t get any respect.” American adults ignore it, ridicule it, take it for granted, romanticize it. High school teachers are not paid well, are badgered relentlessly by politicians and the media, have been disempowered in recent decades by Congress and state legislatures, and they have seen their perceived value to the society diminished.

If Americans want high school to be different, to be better, then we need to change the way we treat high school as an institution and the people who work in and attend high schools. A first significant step in this direction would be to give high schools the respect they most certainly deserve.

David Marshak

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WEBSITE RESOURCES

The Bill and Melinda Gates Foundation: www.gatesfoundation.org.
Coalition of Essential Schools, CES National Web: www.essentialschools.org.

ADULT LEARNING AND DEVELOPMENT TODAY

The adult education and literacy system in the United States is one sector of the nation's overall education system that remains largely unrecognized and misunderstood. In this chapter, we provide some fundamental information about the theoretical heritage of adult learning and development, the goals of the adult education and literacy system, as well as a description of the adults served by this system. We also identify and discuss several concerns about the mission and quality of the adult education services that largely remain unresolved. Note that throughout this chapter, we will use the terms "adult education and literacy system" and "adult education" interchangeably to refer to the same educational sector.

The adult education and literacy system is composed of a broad network of educational services predominantly funded by the *Workforce Investment Act of 1998* (WIA). One way of understanding the scope of these services is to examine the various outcomes given priority within the present system. Federal data on the human investment impact of the adult education system indicates that over the years 1993-1998 (U.S. Department of Education 2003a), these outcomes were achieved:

- 823,155 entered other training
- 257,730 obtained U.S. citizenship
- 274,496 registered to vote
- 676,855 retained employment or advanced in their jobs
- 746,084 gained employment
- 161,960 were removed from public assistance
- 1,182,094 gained basic English literacy skills

Similar outcomes have been cited as clear evidence of the important role that adult education programs

play in the United States's overall educational system (Beder 1989). Despite these telling numbers, Sticht observes, the value of the adult education and literacy system in the United States remains underestimated by the public, as well as by many state and federal policymakers (Sticht 2004). The system is often regarded as a "second-chance" education.

We view the aforementioned list of adult education outcomes prioritized under the *Workforce Investment Act of 1998* as a list of the kinds of potential changes—or life improvements, as termed by Hannah Fingeret and Cassandra Drennon (1997)—in the lives of adult learners that the adult education system seeks to accomplish. Adult learners enrolled in adult education programs experience changes in other ways that are not easily quantified but equally significant, such as motivation to pursue further learning, increased self-confidence as a learner, or improved self-efficacy as a worker, citizen, or parent. In this chapter, we provide the reader with an understanding of change as a key construct of adult learning and development theories and also change as a policy goal of the adult educational system. This two-pronged approach to the discussion of change in the lives of adult learners enables us to highlight areas where adult learning and developmental theory intersect with adult education practice and policy, as well as areas where these bridges in thinking have yet to be fully explored.

One challenge in preparing a chapter on adult education is the complexity of defining "adult learner." There is a lack of clarity regarding what constitutes an adult learner. We have attempted to blend definitions culled from theory as well as policy to show overlap and differences. In the early history of adult education in the United States, age was the primary criterion for defining an adult. For example,

as part of census data collections in the mid-1800s, illiteracy rates were based on the skills of individuals who were at least ten years old, and in the early 1900s, of individuals who were at least twenty years old (Sticht 2003). A widely accepted definition of “adult learner” was put forth by Arthur Chickering (1969) who viewed an adult learner as someone whose major life role is something other than being a full-time student. We use this definition in our chapter because it acknowledges the various roles and responsibilities that adult learners must tend to while they pursue an education. Currently, the adults served by government-funded programs under the *Workforce Investment Act of 1998* include those individuals aged sixteen or older who are not enrolled in school and do not possess a high school diploma. While out-of-school youth are included in the policy’s targeted population, the adult education field is not in agreement about whether adult education programs should bear the responsibility of educating an increasing number of teenage youth. Although “adults” of this age group fall under the purview of adult education programming, they do not easily fit into theoretical paradigms as teenagers are considered part of adolescent, not adult, development. The issue of youth enrollment in adult education is a topic we address in more detail below.

This chapter begins with some basic facts and figures about the adult education and literacy system, such as enrollment numbers, areas of rapid growth, and levels of federal and state funding. This review is followed by a theoretical history of adult learning and development, which highlights the evolving orientations toward the nature of change. We present this theoretical review before our more detailed description of the adult education system to provide the reader with an understanding of the historical legacy in adult learning and adult development that informs (or in most cases, has yet to inform) practice and policy in the adult education field. We also present this information first because it provides an important foundation for gaining insight into several enduring complexities and debates facing the current adult education system that are discussed toward the end of the chapter. The chapter ends with an implications section in which we highlight areas of adult learning theory and development which merit examination in the adult education context. Specifically, we discuss ways that adult education

practice and policy can work to ensure that changes, such as finding employment, becoming a citizen, or leaving welfare, are optimally meaningful to the adult learners who experience them. Finally, we discuss the implications of ideas presented in this chapter and provide a list of suggested activities for further reflection.

SOME FACTS ABOUT THE ADULT BASIC EDUCATION SYSTEM

The *Workforce Investment Act of 1998*, which effectively replaced the *Adult Education Act of 1964* and the *National Literacy Act of 1991*, along with its constituent *Title II: The Adult Education and Family Literacy Act (AEFLA)*, represent the principal sources of funding for adult education and literacy programs targeting adults sixteen and older who do not possess a high school diploma or an equivalent, who are not currently enrolled in school, or who possess a high school diploma but need English language and literacy skills. Also, according to WIA, adult education refers to those services below the post-secondary level. From this perspective, there are three basic categories of program services: adult basic education (ABE), adult secondary education (ASE), and adult English to Speakers of Other Languages (ESOL, also referred to as English as a Second Language [ESL]). Adult basic education or ABE programs are geared towards native English speakers or proficient English speakers who read at lower than an eighth grade level, while adult secondary education (ASE) or General Educational Development (GED) programs are geared towards those adults who are already reading at an eighth grade level or above. Adult English to Speakers of Other Languages (ESOL) programs are designed to serve adults whose primary language is one other than English and who need to develop English language and literacy skills.

According to the Department of Education, the 2000 national enrollment in federally funded adult education programs totaled 2,891,895, with adults in ESL programs (38 percent) composing the largest proportion of the overall enrollment, followed by adults in ABE (37 percent) and in ASE (25 percent) (U.S. Department of Education 2001a). These enrollments likely underestimate the actual enrollment in adult education as many adults also

enroll in non-federally funded programs in the higher education system and are not included in these figures.

The adult ESOL learner population represents the fastest growing sector of the adult education system. In fact, some kind of ESL instruction is provided in nearly 70 percent of federally-funded adult education programs, while 21 percent of programs are predominantly ESL-only programs (Center for Adult English Language Acquisition 1999). In 2000, approximately 64 percent of the total adult ESOL enrollment resided in five states—California, Florida, New York, Illinois, and Texas (U.S. Department of Education 2001a), although nearly every state has experienced marked increases in their adult ESOL enrollment numbers (Tracy-Mumford 1999).

In many states, such as California and Texas, the adult basic education system consists of a network of multiple providers, including public adult schools, community colleges, libraries, community-based organizations, faith-based organization, and correctional institutions. In Connecticut and Hawaii, the adult basic education system is governed by the state Department of Education, while in other states, such as Iowa and Oregon, the state community college system is the primary provider of adult basic education services (Council for the Advancement of Adult Literacy 2003). In 1996, 59 percent of the recipients of adult education grants were awarded to local educational agencies, 15 percent to post-secondary institutions (mostly community colleges), and 14 percent to community-based organizations (Alamprese, unpublished manuscript). Correctional programs make up another 4 percent of grant recipients. Eight percent of the grants were awarded to various providers, such as libraries, private industry, and literacy organizations (Alamprese, unpublished manuscript). The effectiveness of programs is monitored under the WIA/AEFLA through the National Reporting System (NRS) for Adult Education which requires states to develop outcome-based performance standards for their adult education programs (U.S. Department of Education 2001b).

Although developmental (or remedial) post-secondary education is not targeted under WIA/AEFLA and generally is considered to be a separate education system from the adult education system,

the adult learners in these two systems often demonstrate similar basic skill needs (Reder 2000). With the implementation of WIA and its focus on workforce development, post-secondary institutions play an increasingly important role in the provision of adult education services. For example, workforce development programs based at two-year colleges represent the most rapidly expanding sector of higher education services in several states (Education Commission of the Fifty States 2000).

The lack of adequate funding is a chronic reality in the U.S. adult education system. In 2002, \$494.8 million in federal funds were directed toward adult education programming, with an additional \$70 million spent on English literacy and civics programs (U.S. Department of Education 2002). In 1998, per-student expenditure (combined federal and state funds) in the adult education and literacy system totaled \$374 per student, a meager investment compared to the nearly \$7,000 spent per student in the K–12 system (U.S. Department of Education 2001c) and roughly \$8,600 spent on instructional expenditures per student in public higher education (U.S. Department of Education 2003b). Most states rely on federal funds—which ranged from about \$800,000 to \$64 million per state in 2004 (U.S. Department of Education, 2004)—to support training, development, and evaluation activities. States with limited resources are often unable to commit adequate funding to the training and development of program instructors (Sabatini, Ginsburg, and Russell 2002) or the appropriate assessment and evaluation of learners in their programs (Mislevy and Knowles 2002).

Maricel G. Santos and Eleanor Drago-Severson

BENCHMARKS FOR ADULT LEARNING: SCHOLARSHIP AND RESEARCH

In K–12 education, the importance of attending to *how* children learn and develop in order to facilitate their educational process has, understandably, been

the focus of national attention for centuries. Yet, it was only in the 1920s—when adult education was recognized as a professional field—that academics and practitioners began systematically investigating questions about *how* adults learn. In fact early on, inquiries were guided by questions related to “whether or not adults *could* learn” (Merriam 2001a, 3). Since the late 1960s and early 1970s, however, greater attention through both research and dialogue has focused on developing a deeper understanding of adult learning and how to better support adults in their quest to learn and grow. In this section, we present key theories of adult learning as they emerged in the field from the 1970s through the first years of this century. Next, we discuss one central theory of adult development, constructive-developmental theory (Kegan 1982, 1994, 2000), and its distinguishing features from theories of adult learning. Table 19.1 presents a chronological listing of the various theories of adult learning and development that have influenced the field. Given the scope of this chapter, we will discuss only the main theories and their constructs. Check under authors’ names in this chapter’s reference list for additional resources for further discussion of these theories.

In discussing theories of adult learning and adult development our goal is to highlight how scholars construct the nature of change and to illuminate the key tenets of each major theory. We focus on the nature of change as described by various theories of adult learning and one theory of adult development to emphasize the key distinctions as to what is changing, according to each framework. While both types of theories are important and very useful in considering supports for adult learning, there is one key distinguishing factor that we would like to point out. The adult learning theories, for the most part, focus on changing habits of mind, perspectives or viewpoints that constitute what Mezirow (1991) calls a “frame of reference.” In contrast, constructive-developmental theory (Kegan 1982, 1994, 2000) focuses on the *process* by which changes take place in *how* a person knows—changes in a person’s underlying meaning system or frame of reference or epistemology. Constructive-developmental theory illuminates the process of development as an incremental one that occurs through a re-negotiation of the subject-object balance (we describe this later in the entry). These types of

changes, according to constructive-developmental theory (Kegan 1982), alter a person’s way of knowing—the very way a person takes in and understands his or her experiences. This theory helps us to design practices and shape contexts that support changes in an adult’s way of knowing.

A MOSAIC OF THEORIES OF ADULT LEARNING: THERE IS NO SINGLE THEORY OF ADULT LEARNING

To frame this section, we address the following characteristics of each theory, where appropriate: the key terms in each framework; the focus of change (i.e., what changes); the factors considered to contribute to or support those changes; and on whose experiences the theory has been developed. Table 19.2 on page 572 presents an overview of the theories of adult learning and their depictions of these characteristics.

Freire: Education as Liberation

In the 1970s Paulo Freire put forth his groundbreaking theory of education as a liberating process. His work centers on the idea that a person can change in critical ways when engaging in the learning process. Early on this theory was supported mainly by anecdotal and testimonial evidence. Freire (2000) argued that the “banking method” of education, with its emphasis on learning through passive listening, acquiring facts, and storing knowledge, is oppressive.

Freire believed that the main purpose of education is liberation, and that in order to truly engage in the process of education and to become an educated person, adult learners need to work with a contextualized curriculum—one that draws upon life issues that are relevant and meaningful to them. It is through this liberating process of education—one that invites adults to discuss and reflect on real life issues—that adults (initially impoverished, illiterate Brazilian rural workers) come to better understand how structures within society have oppressed them and how they can move beyond such structures, challenges, and obstacles by taking action to transform their worlds. One main principle of Freire’s (2000) work centers on the process of ‘conscientização’ or “conscientization” (p. 17),

Table 19.1

Chronological Listing of Theories of Adult Learning and Adult Development

1970s: Introduction of theories of emancipatory learning, andragogy, ego development, intellectual and ethical development, action science, and phasic approaches to adult development.

- (1970) Paulo Freire. Main tenet: A person can change in critical ways when engaging in learning relevant to one's life experiences and by having opportunities to dialogue and reflect on these. Supported early on by anecdotal and testimonial evidence. Argues that the "banking method" of education with its emphasis on passive listening and acquiring facts and knowledge (storing them) is oppressive. Major theory of adult learning.
- (1968, 1970, 1975, 1980, 1984, 1994) Malcolm Knowles. Andragogy and self-directed learning (in contrast to pedagogy). Focus of scholarly research and discussion in the 1970s and 1980s. Andragogical model of adult learning.
- (1970) Jane Loevinger, and Ruth Wessler. Introduction of theory for measuring ego development vis-à-vis a sentence completion test.
- (1970) William G. Perry. Theory of intellectual and ethical development based on studies of college-aged students.
- (1974, 1978) Chris Argyris and Donald Schön. Action science as a theory of learning for individuals and organizations. Illumination of theories-in-use and espoused theories and differences between Model I and Model II thinking. (Also discussed in Chris Argyris, R. Putnam, and D. M. Smith, 1985).
- (1978) Daniel Levinson, with Charlotte N. Darrow, Edward B. Klien, Maria H. Levinson, and Braxton McKee. Age as an organizer of experience. Highlights how men manage life tasks that arise in different phases.
- (1978) Lev S. Vygotsky. Zone of proximal development as a support to facilitating and scaffolding learning.

1980s: Introduction of cognitive skills based adult development, characteristics of adult learners, mentoring relationships as supports to adult learning, dialogical processes and their influence on adult development, critical thinking as a support to adult learning, and constructive-developmental theory.

- (1980) Kurt Fischer. Introduction of a theory of cognitive skill development in connection to adult learning.
- (1981) Patricia Cross. Characteristics that influence adult learning: *personal characteristics* (e.g., aging, life phases, developmental stages); *situational characteristics* (e.g., part-time versus full-time learning; voluntary versus compulsory learning).
- (1983, 1986, 1999) Laurent Parks Daloz. Attention to teachers and their role as mentors in order to support adult learning and adult development (a constructive-developmental approach).
- (1984) Michael Basseches. Importance of the relationship between dialectical thinking and supporting adult development.
- (1987) Stephen Brookfield. Attention to the role of critical reflection in supporting adult learning. Attention to the role of context in facilitating or hindering adult learning.
- (1982, 1994, 2000) Robert Kegan. Introduction of constructive-developmental theory (a Neo-Piagetian theory of development across the lifespan). Growth is defined as a gradual process and re-negotiation of the "subject-object" balance. This theory delineates six full stages of development across the lifespan (i.e., meaning making systems) and four transitional stages in between each of them.

1980s: New stream of scholarship and research: Introduction of women's development theories—focusing on women's distinctive characteristics as learners.

- (1982) Carol Gilligan. Introduction of a theory of women's development.
- (1986) Jean Baker Miller. Further articulation of a new psychology of women.
- (1986) Mary F. Belenky, Blythe McVicker Clinchy, Nancy Rule Goldberger, and Jill Mattuck Tarule. Introduction of a theory about women's ways of knowing, with a focus on the development of self, voice, and mind.
- (1996) Daniel Levinson, and Judy Levinson. Attention to the phases or life tasks common to women's lives.

1990s: Boys' and men's development: Theories illuminating boys' and men's development in present societal context.

- (1996) Michael Gurian. Discussion of the importance of parents, mentors, and educators in the development of boys.
- (1998, 2000) William Pollack. Discussions about the importance of illuminating boy's true voices and the importance of examining and rescuing males from the myths of boyhood.
- (1999) Michael Gurian. Research focused on the moral development of boys and young men.
- (1999) Dan Kindlon, and Michael Thompson. Discussion related to the importance of protecting the emotional life of boys.

Continued

Table 19.1 (continued)

- (1999) Eli Newberger. Work focusing on the nature of male character and how to nurture it.
- (2001) Michael Gurian, Patrick Henley, and Terry Trueman. Research illuminating the ways in which boys and girls learn differently. Focused attention on implications of this for teachers and parents.

1990s: Focus shifts to transformative learning. Self-directed learning remains prominent in discussions, though not as much research was oriented toward this area from the 1990s to current day. Attention to women's development was still prominent.

- (1990, 1991, 1994, 1996, 2000) Jack Mezirow. Transformational learning Theory. A major theory of adult learning. Decade of 1990s is reported to be "The Transformational Learning Decade." Mezirow's theory was the focus of much research and scholarly discussion from the 1990's–present. Self-directed learning was still prominent and called attention to informal learning.
- (1990) Victoria J. Marsick, and Karen Watkins. Focuses on informal and incidental learning in the workplace (i.e., when people have the need, motivation, and opportunity to learn—learning can take place). Learning can be unexpected, not highly conscious; and connected to the learning of other people (emphasis on the role of context).
- (1990) Barbara Rogoff. Focused attention to the importance of social context in supporting cognitive development, the zone of proximal development, and scaffolding learners in order to support learning.
- (1991) Gerald Grow. Discussion of how to teach adults to be self-directed learners, and the importance of being self-directed as an adult.
- (1991) Judith V. Jordan, Alexandria G. Kaplan, Jean B. Miller, Irene P. Stiver, and Janet L. Surrey, eds. Continued attention to women's growth through the context of interpersonal relationships.
- (1992) John M. Dirkx, and Maryanne E. Spurgin. Attention to the role of teacher beliefs in supporting adult learning. Implicit theories of adult basic education teachers: how their beliefs shape classroom practice.
- (1993) Rosemary Caffarella, and Sandra Olson. Attention to reviewing the literature and theories relating to the psychosocial development of women.
- (1994) Patricia Cranton. The importance of understanding transformational learning and of helping adult educators to promote transformational learning in the context of professional development.
- (1994) Patricia King and Karen Kitchener. Enhanced attention to the role of reflective judgment in adult learning.
- (1994) Robert Kegan. Introduction of the argument that the demands of modern adult life outpace the capacities of most adults.
- (1995) Stephen Brookfield. Attention to the role of educators in building contexts that support adult learning and critical reflection. The important role of examining assumptions in order to support adult learning.
- (1997) John M. Dirkx. Focus on the role of emotions and imagination as key processes in supporting adult learning. Imaginable method is introduced as an alternative to reflective processes of making meaning. Discussion of the importance of nurturing the soul in supporting adult learning.
- (1998) M. Cecil Smith and T. Pourchot. Discussion of adult educational psychology in light of theories of adult learning, skill development, and adult development.
- (1999) Sharan Merriam, and Rosemary Caffarella. A comprehensive review of how the field conceptualizes learning in adulthood.

1990s: Stream of research and scholarship directed toward understanding the potential of group and organizational learning.

- (1994) P. Senge, A. Kleiner, Charlotte Roberts, Richard B. Ross, and Brayn J. Smith. Introduction of the *Ladder of Inference* and strategies for building a learning-oriented organization.
- (1994, 1996) Patricia Cranton. Introduction of ideas related to how educators can promote transformative learning (1994); Professional development as a means for transformative learning (1996).

2000s: Bringing together of theories of adult learning and adult development, focusing more deeply on the importance of context in supporting adult learning and development, and increased attention to the role of adult educators in supporting adult learning and development.

- (2000) Jack Mezirow and Associates. Scholars join together to build upon connections and differences between various theories of transformative learning and constructive-developmental theory.
- (2000) Lyle Yorks, and Victoria Marsick. Focus on transformative learning in organizations.
- (2000) Ethan Will Taylor, and Kathleen Taylor (2000a). Critical literature review of the ways in which Mezirow's theory has been expanded (E.W. Taylor) Importance of interpersonal relationships as supports to adults' transformational learning (Taylor). Focused attention on how teaching, context and culture can support transformational learning.
- (2000) Kathleen Taylor, Catherine Marienau, and Morris Fiddler. Enhanced attention to the ways in which teachers can support adult learning. See also Brookfield (1995). To support adult learning, educators need to teach with developmental intentions. This, in Kathleen Taylor's (2000) view holds the potential to promote "transformative outcomes, meaning that learners will not only know *more* but know *differently*" (p. 153).

meaning raising consciousness in order to help learners understand the world differently so that they can re-conceptualize their own position in it. With an empowered stance and a new outlook, Freire believed that adults could then be in a better and stronger position to transform or change their world.

Knowles: Andragogy and Self-Directed Learning (in Contrast to Pedagogy)

One of the central foci of scholarly research and discussion in the 1970s and 1980s was Malcolm Knowles' (1968, 1970, 1975, 1980) seminal theory of "andragogy," which centered on supporting adults' learning, in contrast to pedagogy, which focused on supporting children's learning.

According to Knowles (1984), four characteristics need to be considered when supporting adult learning:

1. Adults must understand *why* they need to learn something.
2. Adults need to learn *experientially*.
3. Adults approach learning as *problem solving*.
4. Adults learn best when the topic is of immediate *value*.

Five assumptions underlie Knowles's (1984) model. They are as follows:

1. Adults tend to be self-directing in their learning.
2. Adults come to their learning experiences with rich life experiences from which to draw upon. These experiences can serve as resources for learning.
3. Adults' learning needs to align with the demands of their social roles (e.g., the role of parent, worker, and citizen).
4. Since adults' readiness to learn is frequently influenced by their need to know or do something, they tend to have a life-, task-, or problem-centered posture toward learning in contrast to a subject matter or disciplinary orientation.
5. Adults are generally motivated to learn because of intrinsic or internal factors (such as helping their children with homework) as opposed to external factors (e.g., a raise in salary or a promotion).

Knowles' theory, which was developed from working with adults in educational settings, asserts that adults learn best when learning is self-directed and when they have a need to know.

Levinson: Age/Phasic Theory—Life Tasks

Daniel Levinson (Levinson et al. 1978; Levinson and Levinson 1996) developed a theory that differentiates the complex life tasks that adults negotiate at different ages or phases in their lives. His 1978 theory focused on men's life tasks, and his 1996 theory, developed in collaboration with his wife, Judy Levinson, focused on women's life tasks. According to these theories, the physical, psychological, social, and emotional changes that men and women experience at particular life phases are related to age, and follow a predictable and generally consistent sequence. Levinson's theories illuminate how adults develop during different phases of their lives in response to managing various life tasks that are encountered during distinct phases of their lives.

These theories were developed for the most part from studies of middle-class, white, college-educated men and women, and outline the physical, psychological, social, and emotional changes that adults generally experience, and highlight how, in most cases, these correspond with age.

Cross: Characteristics of Adult Learners

During the early 1980s, another focus of scholarly research and discussion emerged when Patricia Cross (1981) introduced the importance of considering the characteristics of adult learners when supporting their learning and growth. As educators, Cross (1981) maintained that we must attend to adults' personal characteristics: aging, life phases, developmental stages, situational characteristics (part-time versus full-time learning) and voluntary versus compulsory learning when conceptualizing how to support learning.

Her theory, primarily developed from working with adults in higher educational settings and professional development, sheds light on the importance of understanding the personal and situational characteristics adults bring to their learning experiences and how these factors contribute to and influence learning.

Table 19.2

Overview of Adult Learning Theories and Their Essential Characteristics

Prominent Adult Learning Theories							
Theorist	Paolo Freire	Malcolm Knowles	Daniel Levinson	K. Patricia Cross	Laurent Daloz	Stephen Brookfield	Jack Mezirow
Key terms specific to theory	Conscientização	Andragogy; self-directed learning	Life tasks	Characteristics of adult learners	Mentoring relationships as “holding environments”	Reflective practice and critical teaching	Transformational learning theory; “frames of reference”; “learning structures”
Focus of change, i.e., what changes?	An adult’s consciousness	Skills and knowledge	Physical, psychological, social, and emotional growth	Changes in adult learning	Growth of individual	Changes in adult learning, changes in teachers’ reflective capacities and critical teaching	Changes in behavior and perspective
What factors are described as contributing to or supporting change?	Contextualized curricula	Learner readiness; need to know	Age	Personal and situational characteristics	Mentoring, bridges	Opportunities for reflective practice	Opportunities for reflecting on experiences and problem solving; disorienting dilemma
On whose experience has the theory been largely developed?	Socio-politically marginalized groups in Brazil	Adults in traditional and nontraditional educational settings	Middle-class, white, college educated men and women	Traditional college-age learners	Adults in traditional and nontraditional educational settings, including professional training	Adults in traditional and nontraditional educational settings, including professional training and professional development	Adults in traditional and nontraditional educational settings, including professional training

Daloz : Mentoring as a Support to Learning

In the early 1980s, Laurent Parks Daloz put forth his theory of mentoring as a mechanism for supporting adult learning and development. His theoretical model emphasizes the important role that teachers can play as mentors in support of adult learning and development.

Daloz applies Robert Kegan's constructive-developmental theory (1982, 1994), will be discussed later in this chapter, to mentoring and suggests that the relationship between mentor and mentee can provide a "holding environment" for supporting adult learning and growth. Daloz (2000) maintains that a mentor can serve as a bridge for supporting growth. In other words, as a bridge, a mentor can support a mentee—by recognizing and attending to her or his present developmental level—and by providing the necessary challenges and continuity for development (Daloz 2000; Kegan 1994). Support, as Daloz (1986) explains, is "the activity of holding, of providing a place where [a person] can contact her need for fundamental trust, the basis of growth" (p. 215). Mentors can provide trust by attending carefully to mentees' meaning making, expressing positive expectations, advocating for the mentee, and creating a safe context for growth (Daloz 1983, 1999).

Daloz (1983, 1986, 1999) contends that an essential way of attending to the diverse needs of adult learners is through the mentoring relationships, wherein adults can benefit from both a mentor's intentional supports and challenges in order to learn from and adapt to the changing circumstances of life transitions. Daloz (1986) maintains that "holding environments" (Kegan, 1982, 1994), contexts in and out of which a person grows, can be shaped to facilitate learning and growth when they consist of a delicate and needed balance of developmentally appropriate supports and challenges (we discuss "holding environments" later in this chapter). Daloz, citing Kegan (1982), asserts that *both* support and challenge are essential for supporting learning and growth. Environments that are excessively supportive without enough challenge can be inadequately stimulating. In contrast, environments that are overly challenging can feel threatening and lead to withdrawal.

Daloz discusses how teachers-as-mentors (in educational and professional settings) can support adult learning and create a safe environment in which

adults are encouraged to take risks in their learning. In addition, Daloz (1986) emphasizes the importance of open and honest communication between mentors and adult learners. According to Daloz, a mentor's self-disclosure can empower adult learners. He advocates that educators use open dialogue as a tool to support adults as they grow from learning from multiple perspectives and alternative ways of understanding their experiences. To best support adult learning, Daloz urges educators to cultivate environments of mutual respect.

Brookfield: The Role of Critical Reflection in Teaching and Supporting Learning

In the late 1980s, Stephen Brookfield (1987) introduced the necessity of critical reflection for teachers and adult learners as well as the importance of attending to the context of learning. His theory was developed from working with adults and teachers in traditional and nontraditional settings. Brookfield advocates that engaging in reflection, and reflective practice, is a necessary support for teachers—in terms of enhancing their own growth and their capacities to facilitate adult learning—and for adult learners, more generally. For teachers, the central goal of reflective practice is improving one's teaching—which includes attending to the emotional and intellectual health and growth of the teacher (Brookfield 1995; Osterman and Kottkamp 1993; Schön 1983). When adults engage in reflective practice, they become aware of their own and others' assumptions and behaviors. "In many ways," Brookfield (1995) writes, "*we are* our assumptions. Assumptions give meaning and purpose to who we are and what we do" (p. 2).

Engaging in reflective practice, Brookfield (1995) explains, supports adult learning because it provides a space for examining and modifying assumptions. However, identifying problems is a challenging task, because the assumptions informing and directing behavior are not easy to articulate. Once a problem is acknowledged, adults can gather information (data) about it from various sources and envision solutions by "stepping outside the action to observe it critically and to describe it fully" (Osterman and Kottkamp 1993, 24). This description should incorporate both cognitive and affective aspects of behavior.

Brookfield (1987) also maintains that teachers will

benefit from engaging in critical teaching. In other words, to support adult learning, teachers must be “catalysts of discussion and inquiry, sometimes as contributory group members. We perform such diverse roles as being advocates for missing perspectives, adversaries to propaganda, recorders of sessions, mediators of divisive tendencies, and resource persons” (Brookfield 1987, 80). Similar to the teaching principles put forth by Freire (1986, 1992), and Jack Mezirow (1990), Brookfield (1987) notes that teachers who engage in critical teaching have a willingness and a developed capacity to act in these types of roles as they support adult learning.

In addition, Brookfield (1987), like Cranton (1994) and Daloz (1986), emphasizes the importance of creating contexts in which adult learners have ongoing opportunities to make the assumptions underlying their ideas and actions explicit. Both Brookfield (1987) and Daloz (1986) assert that adult learning is supported when adults are encouraged to examine their assumptions and to envision alternative ways of thinking and acting. Brookfield urges educators to create situations where adults are invited to experiment with adopting a new perspective, one that differs from their own, by engaging in role playing. Doing so supports learning.

Like Cranton (1994) and Freire (1986, 1992), Brookfield describes how reflection on assumptions is an important aspect of adult learning that can create a shift in perspective, a change in consciousness, or a transformation of mind.

INTRODUCTION OF WOMEN’S DEVELOPMENT THEORIES: 1980S

In the 1980s several theories emerged that focused specifically on women’s distinctive characteristics as learners. Earlier theories were developed for the most part, based on men’s experiences and later applied to women’s experiences. Women’s increased educational access and educational accomplishments have helped to strengthen ideas (Hayes 2001). Models of women’s development shed light on the importance of relational knowing and interpersonal connection in supporting growth and change (Belenky et al. 1986; Fiddler and Marienau 1995; Gilligan 1982; Miller 1986; Taylor, Marienau, and Fiddler 2000).

For example, Carol Gilligan (1982) asserts that

an ethic of care and concern for relationships with important others are essential characteristics for women and that these must be considered when supporting women’s development and learning. Similarly, Mary Field Belenky, Blythe McVicker Clinchy, Nancy Rule Goldberger, and Jill Mattuck Tarule (1986) highlight the need to build a collaborative model, which they refer to as “connected teaching,” to support women’s development and learning. These scholars urge educators to attend to the relational aspects of the learning process when supporting women’s development (Belenky et al. 1986; Caffarella and Olson 1993; Fiddler and Marienau 1995; Gilligan 1982; Goldberger, Tarule, Clinchy, and Belenky 1996; Jordan, Kaplan, Miller, Stiver, and Surrey 1991; Levinson and Levinson 1996; Miller 1986).

More recently, scholars and researchers have refocused efforts to examine boys and men’s development. In particular, this work has investigated boy and men’s development in our contemporary society, emotional intelligence, and the education of boys and men (Gurian 1996, 1999; Gurian, Henley, and Trueman 2001; Kindlon and Thompson 1999; Newberger 1999; Pollack 1998, 2000).

TRANSFORMATIVE LEARNING THEORIES

During the 1990s the focus of scholarly conversation and research shifted to transformative learning. Self-directed learning remained an important area, though less research has centered on it from the 1990s to current day (Merriam 2001b). Scholarly attention to women’s and men’s development were still prominent.

A major theory of adult learning that emerged in the 1990s was Jack Mezirow’s (1991, 2000) Transformational Learning Theory. This theory was developed from studies of people in adult education. The decade of the 1990s has become known as “the transformational learning decade” because this theory moved to the foreground and took center stage (Merriam 2001b). Mezirow’s theory of adult learning has been the focus of research and scholarly conversation from the 1990’s to the present. Other transformative learning scholars who have made important contributions to this field are listed in Table 19.1.

According to Mezirow's theory, learning to make meaning is a process that focuses on and is shaped and delimited by our frame of reference, which is a "meaning perspective"—the results of how we interpret experience. Meaning structures are two-dimensional. One component is *a habit of mind*, which are broad sets of predispositions resulting from psychocultural assumptions that shape and determine our expectations and how we interpret the meaning of experience. The second component, which is the expression of *a habit of mind*, is a *point of view*. It is comprised of "clusters of meaning schemes" or "sets of immediate and specific expectations, beliefs, feelings, attitudes, and judgments—that tacitly direct and shape a specific interpretation and determine how we judge, typify objects, and attribute causality" (Mezirow 2000, 18). According to Mezirow, "We resist learning anything that does not comfortably fit our meaning structures, but we have a strong, urgent need to understand the meaning of our experience" (1994, 223). Meaning structures are transformed through reflection (defined by Mezirow as "attending to the grounds [justification of one's beliefs]" (1994, 223). Reflection takes place in the context of problem solving (i.e., reflecting on the content of the problem, the process of problem solving, or the premise of the problem). Disorienting dilemmas, single, dramatic events, serve as triggers for reflection.

According to Mezirow (2000, p. 19), there are four ways to learn:

1. By elaborating existing *frames of reference*
2. By learning new *frames of reference*
3. By transforming *points of view*
4. By transforming *habits of mind*

The most significant learning, Mezirow asserts, involves critical reflection about oneself (1991, 2000). Mezirow suggests that examples of this may include: a disorienting dilemma (e.g., unemployment); self-examination of guilt feelings; intentional assessment of assumptions; exploration of new roles; developing a course of action; and/or building competence and increasing self-confidence. Many life-cycle changes can be experienced as fundamental changes in our worldview, but in reality, Mezirow suggests, they fit into normative life patterns. According to Mezirow (2000), "Transformational learning has both

individual and social dimensions and implications. It demands that we be aware of how we come to our knowledge and as aware as we can be about the values that lead to our perspectives" (p. 8).

More recently, E. W. Taylor (1997, 1998, 2000a, 2000b) conducted a critical review of research associated with Mezirow's theory and discovered several ways in which the theory has been expanded. Crucial changes, according to Taylor, are mentioned below.

1. Transformational learning, which was initially considered to be a linear process, has been found to be a recursive process (Taylor, 2000b). Also, particular aspects of the process, for example the need to identify, express, and work through feelings (affective components), "seem to be more significant to change" than other aspects (Taylor 2000b, 292). Focusing on *both* thoughts and feelings are essential to the process of transformational learning.
2. Rather than conceptualizing a "disorienting dilemma" as being a single event, Lisa Baumgartner (2001) cites E.W. Taylor's work (2000b, 300) and states that the "disorienting dilemma" can be a "long cumulative process."
3. In all of the studies Taylor (2000b) reviewed, a central finding emerged about the critical role that relationships play in the transformational learning process (Baumgartner 2001, 307). As Baumgartner (2001) notes in referencing Taylor's (2000b) finding, "transformational learning is not an independent act but is an interdependent relationship built on trust" (p. 19).
4. Context and culture have emerged as important factors to consider when supporting the transformational learning process (Taylor; 2000b, Clark 1991).

Table 19.1 depicts a chronology of scholarly work that has focused on transformative learning. We highlight the evolution of transformative learning theorists' work briefly below.

(1990) Victoria J. Marsick, and Karen E. Watkins. Focuses on informal and incidental learning (i.e.,

wherever people have the need, motivation, and opportunity to learn—learning can take place). Learning can be unplanned and unexpected, not highly conscious, and connected to the learning of other people (emphasis on the role of context). (See also Kasl and Elias 2000.)

(1990) Barbara Rogoff. Focuses on the importance of considering the social context, the zone of proximal development, and on scaffolding learners when supporting learning. This work builds on Lev Vygotsky's (1978) theory of the *zone of proximal development*.

(1992) John M. Dirkx and Maryann E. Spurgin. Focuses attention on the role of teacher beliefs in relation to supporting adult learning. Illuminated how teachers' implicit theories and beliefs about adult basic education shape their classroom practices.

(1994, 1996, 2000) Patricia Cranton. Focuses on helping educators support adults' transformative learning, with particular attention to professional development as an important opportunity for attending to transformative learning.

(1994) Patricia King and Karen M. Kitchener. Enhanced attention to the role of reflective judgment and the development of critical thinking skills in supporting adult learning.

(1994) Robert Kegan. Introduces the argument that the demands of modern adult life often outpace the developmental capacities of most adults.

(1997) John M. Dirkx. Focuses on the role of emotions and imagination in meaningful adult learning. Offered the imaginal method as an alternative to reflective processes of making meaning.

(1995) Stephen Brookfield. Focuses on supporting critical reflection among educators and the need for shaping contexts supportive of adult learning and critical reflection. Emphasizes the importance of examining assumptions in order to support adult learning. (See also Schön 1983.)

(1999) Sharon B. Merriam, and Rosemary S. Caffarella. Research into how to better support learning in adulthood.

Taylor: The Importance of Teaching with Developmental Intentions

Most recently, Kathleen Taylor (2000) has emphasized the importance of supporting teachers in their efforts to teach with developmental intentions. Teaching in this way means not only helping adults to learn information, knowledge, and skills (informational learning, Kegan 2000), but also means teaching with a deliberate focus on supporting learners as they develop more complex ways of knowing or meaning making systems (transformational learning, Kegan 2000). This, in Taylor's (2000) view holds the potential to promote "transformative outcomes, meaning that learners will not only know *more* but know *differently*" (p. 153). She argues that focused attention to supporting adult development will benefit individuals and our society as a whole. She explains,

Adults who develop—that is, whose meaning-constructive systems transform—are likely to become more deliberative, responsible, and competent in carrying out the work of society. . . . They are better able to recognize the need for more just, humane, and equitable economic and social structures and to work toward achieving those goals. (Taylor 2000, 167)

Taylor employs Mezirow's (1990, 1994, 1996) theory and constructive-developmental theory (Kegan 1982, 1994, 2000) to shed light on how we can teach adults with developmental intentions. Bringing together and contrasting key principles of these theories, she (2000) discusses the implications of this for teachers and their students.

Taylor (2000), Kegan (1994), and Daloz (1999) use the metaphor of a bridge to describe how to support adult learning and development. The bridge must be well anchored on both sides in order to provide support. "Such a bridge fulfills the essential requirement, if transformation is the intended outcome, of meeting learners where they are and then guiding and accompanying them on the journey of change (Kegan 1994; Daloz 1999)" (Taylor 2000, 156).

CONSTRUCTIVE-DEVELOPMENTAL THEORY

Constructive-developmental theories of adult growth and development stem from a thirty-year tradition

that examines how adults make sense of their internal and external experiences (Basseches 1984; Belenky et al. 1986; Gilligan 1982; Kegan 1982, 1994, 2000; King and Kitchener 1994; Piaget 1952). Constructive-developmental theory (Belenky et al. 1986; Baxter Magolda 1992; Kegan 1982, 1994, 2000) and the theories of adult learning discussed above offer tools for understanding how to support adult learning and development in ways that can inform the teaching and learning enterprise.

Here, we focus on Robert Kegan's constructive-developmental theory (1982, 1994, 2000) for several reasons. First, it illuminates how a person is an active meaning maker of experience. While other frameworks discuss this, it is central in constructive-developmental theory. As Kegan (1982) puts it, "The activity of making-meaning is the fundamental motion of personality" (p. 15). Second, this theory offers hopeful principles about how to support adult growth (i.e., changes in structure of thinking) so that we can better manage the complexities of twenty-first-century life. Last, it emphasizes that development is *not* the same thing as intelligence and attends to a broad range of aspects of the self (i.e., emotional, cognitive, intrapersonal, and interpersonal lines of development). This theory centers on transformational learning, that is, changes in *how* a person knows, rather than in *what* a person knows.

A person's meaning system—through which all experience is filtered and understood—is referred to as a meaning making system, a way of knowing (Kegan et al. 2001), a developmental level, an order of consciousness, or a stage (Kegan 1994). We use meaning making, meaning systems, order of consciousness, and ways of knowing interchangeably to describe how individuals actively make sense of their experiences. Similar to supporting a child's growth, when considering how to support adult growth we need to shape "holding environments" that provide developmentally appropriate supports *and* challenges to adults who make sense of their experiences with qualitatively different ways of knowing (Kegan 1982, 1994).

Kegan (2000) points to the importance of identifying what is changing as we work to support learning and development. While informational learning (i.e., increases in knowledge and skills) is important, it is not sufficient in terms of supporting growth. Informational learning can, of course, lead to important changes in adults' attitudes and possibly their competencies. How-

ever, reflective learning leads to changes in perspectives. Transformational learning, as defined by Kegan (2000), leads to a transformation of mind—a developmental shift in *how* one knows and understands the world. In other words, transformational learning is learning that helps adults to develop more complex meaning systems (cognitive capacities) that enable them to better manage the complexities of work and life (Drago-Severson 2001, 2004a, 2004b; Kegan 1982, 1994, 2000). Kegan (1994) argues that the demands of modern life oftentimes outpace the capacities of adults. In other words, what is expected of adults in the twenty-first century, in terms of our capacities to perform in our roles as parents, workers, and citizens, often are beyond our developmental capacities.

There is an intimate connection between transformational learning and self-examination (Brookfield 1987, 1995; Cranton 1994, 1996; Mezirow 1991, 1994, 1996, 2000). Increases in developmental capacity broaden adults' perspectives on both themselves and others (Kegan 1982, 1994). For this type of change to occur, attention needs to be devoted to both the context and to how an adult is interpreting his or her experience so that the context can provide both supports and challenges that are developmentally appropriate (Drago-Severson 2004a; 2004b; Kegan 2000). In transformational learning, adults undergo a *development* and profound change in the very way they construct or make sense of experience. This kind of change, a change in one's mental structure or way of knowing, is at the heart of Kegan's constructive-developmental theory.

Central Principles

This theory is based on two central tenets. First, that people actively construct their experiences (constructivism) and second, that people's ways of knowing can change or develop over time (developmentalism). A person's meaning-making system shapes how *all* experiences will be taken in and understood. In other words, a person constructs meaning with the *same* way of knowing across different domains of life (e.g., as worker, parent, and partner), except under extraordinarily rare circumstances (see Kegan 1994). Understanding a person's way of knowing and that it can change over time can help us better understand adults' needs and therefore support their learning and growth.

Another principle is that growth and development are lifelong processes. Development is an interactive process between the person and the environment (Kegan 1982). Growth, according to Kegan's theory (1982, 1994), is a process of increasing differentiation and internalization; as humans, we are involved in a process of growth in which we are constantly (and gradually) renegotiating what is *self* and what constitutes *other* (Drago-Severson 2004b; Kegan 1982). Development involves a qualitative change in the ways in which a person constructs his or her experience—rather than an acquisition of more skills and knowledge. Crucial to growth, according to this theory, are both the structure and the process of meaning making.

A meaning making system is composed of what Kegan (1982) refers to as the relationship or balance between the “subject” and the “object” of a person's way of knowing. Meaning making is an activity by which the self emerges from being embedded in, “subject to” (Kegan 1982), and identified with a culture (e.g., its needs, its interpersonal mutuality, or its own authorship and ideology). As the self emerges, it is able to take the previous culture it was identified with (or subject to) as object and reflect on it. We cannot take a perspective on what we are “subject to” because we are embedded in it. It is not separate from our selves. In contrast, that which a person can take as “object” can be organized, reflected upon, and managed by the self. What a person can take as object are aspects of experience that a person can look at, be responsible for, and take control of. A person's way of knowing dictates how experiences will be taken in, managed, handled, used, and understood. For example, a way of knowing shapes how a person understands his or her role and responsibilities as a teacher, learner, or employee.

Kegan's Ways of Knowing

Up until 1994, this theory was employed for the most part to understand college-educated people's experiences. In Kegan et al.'s 2001 study this framework was employed to understand adult learners' experiences in ABE/ESOL settings. The ways in which adults understand their experiences of the teacher-learner relationship, as presented in Table 19.3, are drawn from Kegan et al.'s 2001 research.

Kegan's constructive-developmental theory consists of six qualitatively different systems of meaning mak-

ing, or ways of making sense of reality. The first two of six systems describe the meaning making of infants and young children and the last describes a mostly theoretical system that is not often found in any population and, if present, has not been detected before midlife (Kegan 1994). Because of this, we describe the three qualitatively different ways of knowing that are most common in adults as the instrumental, the socializing, and the self-authoring way of knowing. Table 19.3 presents the characteristics of how adults with the three most prevalent ways of knowing in adulthood make sense of their expectations for their teachers. It is important to note that there are also four transition stages between each of them (for a full discussion of this, please see Lahey et al. 1988). Moving from one way of knowing to another is a progression of increasing complexity in an individual's developmental capacities.

Table 19.3 illustrates how learners with different underlying meaning systems understand the teacher-learner relationship. As shown, instrumental knowers want teachers to provide clear explanations and step-by-step procedures in order to make them learn. They assess their learning in terms of their ability to demonstrate expected behaviors and by the grades they receive from teachers. When learning, they focus on their own concrete needs and feel supported when teachers give them information. They also feel supported by teachers' efforts to provide extra assistance when they need it in order to get what they need to learn.

Like instrumental knowers, learners who make sense of their experience with the instrumental/socializing way of knowing feel supported in their learning when teachers explain concepts well so that they are able to understand. Unlike instrumental knowers, these learners expect teachers to be good role models. These knowers see their teachers and their peers as sources of support. They want teachers to value them and their ideas and feel most supported by teachers who really “care” about them.

Socializing knowers are not only interested in fulfilling teachers' expectations of them but also identify with these expectations. In other words, they understand the teachers' goals for their learning as their own goals. They view the teacher as the source of authority; however, what is most important to them is that teachers take an interest in them as individuals. This kind of genuine care and concern from teachers facilitates their learning. Socializing knowers

Table 19.3

Learners' Constructions of the Teacher-Learner Relationship

Way of Knowing	Learner Expectations for a Good Teacher	Sample Quotations
Instrumental Knowers	Good teachers show me how to learn and give me their knowledge and the rules that I need to follow to get the right answers. I know that I've learned something because I can do it (demonstrate a behavior) and because I get a good grade (a consequence).	Good teachers "give you that little push." They "make me learn." Good teachers "explain how do to it, ask you write it down, and you write down exactly how to do it. Then we'd do it."
Instrumental/ Socializing Knowers	Good teachers help me to learn by showing me how to do things; they make me learn. Good teachers have rules that I need to follow so I can do things the right way. They explain things and help me understand. Good teachers give me their knowledge; they tell me what I <i>should</i> know. I know I have learned something because I can do it (demonstrate a behavior) and because the teacher tells me so.	Good teachers "teach me all the time." They show me "the correct way to speak so that others will listen." Good teachers say "I have to do it this way because if I don't it's no good." They "make me do writing, speaking, . . . she's good. She's always there." They "make you understand, like if I don't know something, I ask her, 'Can you repeat it?' Then she explains again. She's good."
Socializing Knowers	Good teachers care about me. They explain things to help me understand. Good teachers really listen (they support me). They know what is good for me to know, and they tell me what I <i>should</i> know. Good teachers are kind, patient and encouraging. I can feel, inside, when I've learned something and the teacher acknowledges me in that.	"If you don't have a good teacher, you're not going to be self-confident." "If [the teacher] doesn't teach you the way you learn good, that doesn't help you." "I ask the teacher to explain to me how I'm going to do it."
Socializing/Self-Authoring Knowers	Good teachers explain things well and help us understand. They care about students as people. Good teachers understand my background and that helps me when I'm learning. They listen really well and are knowledgeable. They know what I need to learn, and I know what I want to learn. I have knowledge inside me. Good teachers are polite, and patient; they help me with the things I need to know to pursue my interests and learn what I need to learn make goals. They listen to my feedback and comments so that they can improve their teaching.	"I like a soft person . . . who considers when you are asking a question, they answer you, they don't ignore you. That's the kind of person I like to be a good teacher. So they really understand people. They care for their students." Good teachers "keep explaining things in different ways, they show you different ways to learn. I like that technique." I can ask a good teacher "for help with what I know I do and do not understand, but I don't think I can tell a teacher what to do. Because I'm only a student." "I think it's very tough for a teacher to teach and listen and explain all the time." Good teachers "do their jobs and help me to do better, I'm proud of that."
Self-Authoring Knowers	Good teachers are one source of knowledge, and my classmates and I are another. I offer feedback to teachers to help them improve their practices. Good teachers use a variety of teaching strategies in their practice. They help me to meet my own internally generated goals. I <i>know</i> when I have learned something and when I have, I can then think of different ways to teach what I know to others.	Good teachers "understand their students." "No matter how good a teacher you have, if you don't really want to learn, you're not going to learn nothing." Good teachers "make learning interesting. It has to be interesting to the student." "What you do with knowledge after it's given to you is of your own choosing."

Source: E. Drago-Severson. "We're Trying to Get Ahead: A Developmental View of Changes in Polaroid Learners' Conceptions of Their motivations for Learning, Expectations of Their Teachers, and Relationship to Work." In *Toward a "New Pluralism" in the ABE/ESOL Classroom: Teaching to Multiple "Cultures of Mind,"* ed. R. Kegan, M. Broderick, E. Drago-Severson, D. Helsing, N. Popp, and K. Portnow, 477–614. NCSALL Research Monograph #19. Boston: World Education, 2001.

expect the teacher to know what they need to learn. Although they can feel (internally) when they have learned something, they need the teacher's acknowledgment to solidify, or complete, that feeling. In this way of knowing, having good relationships with teachers facilitates learning.

Learners with a self-authoring way of knowing not only see their teachers as authorities and sources of knowledge but also see themselves and one another as knowledge generators. Unlike socializing knowers, they are able to reflect on their teachers' pedagogy and offer constructive feedback for improving it. Like socializing knowers, they voice appreciation for teachers who employ a variety of teaching techniques to meet learners' needs. Unlike learners with other underlying meaning systems, they are concerned with meeting their own goals and internally generated standards on behalf of what they understand to be their larger learning purposes. Good teachers, in their view, support them in meeting their own goals. These learners do not look to meet teachers' expectations for their learning but rather look inwardly and strive to meet their own expectations. Additionally, they have the capacity to take greater responsibility for their learning (Drago-Severson 2004b).

Kegan's theory centers on illuminating the qualitatively different meaning making systems adults have and how these systems can change over time, provided that developmentally appropriate supports and challenges are available. As shown in Table 19.3, this theory helps us to understand how adults, depending on their way of knowing, have different views of their teachers and different psychological relationships with the "teacher as authority figure."

In Kegan's theory, the focus of change is the structure of a person's meaning-making system. To support development of the mind, we must shape "holding environments" that offer developmentally appropriate supports and challenges.

SUMMARY

We have discussed the basic tenets of theories of adult learning and adult development. In so doing, we have highlighted how various theories construct the nature of change and emphasized key distinctions as to what is changing, according to each framework. As illustrated, the adult learning theories, for the most part, focus on facilitating changes in a person's per-

spective and oftentimes their behaviors. We have also discussed constructive-developmental theory (Kegan 1982, 1994, 2000), which illuminates the process of the change (a re-balancing of the *form of knowing*) that can take place in *how* a person knows. This theory helps us to understand changes in the structure of a person's underlying meaning system—changes in the very way a person takes in and understands his or her experiences.

BRIDGING THEORY AND PRACTICE IN ADULT BASIC EDUCATION

As shown in the preceding paragraphs, theorists in adult learning and adult development have provided the adult education field with a rich legacy and, perhaps more importantly, a vision of what change in adult learning can look like. For our purposes in this chapter, an important caveat is the fact that these theories (with a few exceptions) were developed with a different adult learning population in mind than the targeted population served by the adult basic education system. These differences can be characterized along socioeconomic lines, educational backgrounds, learning goals, language backgrounds, and countries of origin. As highlighted in Table 19.2, several of the most prominent adult learning and developmental theories were based upon the experiences of white, middle-class, highly educated adults who were born in the United States (See Cranton 1994). This trend begs important questions about if and how these theories reflect the experiences of groups predominantly served by the adult basic education system, such as immigrants, high school dropouts, or welfare mothers. Without a doubt, these theories provide a valuable starting point to understanding the adult learning and developmental experiences of adult basic education students—as discovered by the research conducted by Kegan et al. (2001), but it is clear that there is no universal understanding of "adult learning" and "adult development." In the next several entries, we shift our attention from adult learning and developmental theory to describing the adult basic education system in the United States, as well as the unique concerns of ABE programming and policy. A strong case can be made that as we examine adult learning in the adult basic education context, the variables of culture, ethnicity, educational background, learning

style, and sociopolitical circumstance take on important significance in our quest to understand the adult learning experience.

Maricel G. Santos and Eleanor Drago-Severson

THE U.S. ADULT EDUCATION AND LITERACY SYSTEM

Adult education programs are highly diverse in scope and objectives. This diversity in program focus reflects in part the variety of goals and needs within the adult learner population. The more commonly known program services include adult basic education (ABE), English to Speakers of Other Languages (ESOL), General Educational Development (GED) or high school equivalency, family literacy, and citizenship. These program labels should be viewed as general classifications. Program designs may vary widely from community to community and from state to state because of differences in local demographics, funding, professional development standards, and available resources.

This variation in program design may also reflect differences in the professionalization of the ABE/ESOL field across states. When there are differences across states in the infrastructures supporting professional development and training of adult educators, it is not surprising to find differences in the sustainability of quality instructional programs. Currently, there are no federal regulations about how states should handle the certification and the training of their adult educators.

A review by John Sabatini, Lynda Ginsburg, and Mary Russell (2002) highlights the range in state credentialing requirements as well as the accompanying areas of continued debate about the professionalization (or lack thereof) in the adult education field. Some areas of debate include the degree to which an ABE credentialing system should be different from or coordinated with the existing K–12 credentialing system and the question of whether or not ABE credentialing should be handled as a voluntary enterprise. For the most part, professional development in adult basic education is carried out on an in-service basis, although some states, such as

California, sanction graduate-level coursework that features ABE certification or endorsement. Sabatini, Ginsburg, and Russell (2002) examine the limitations of the higher-education route to certifying adult educators. They point out that not all states have the resources to provide higher education training to their adult educators. They also note that higher education courses often provide only limited practicum experience to their teachers. Additionally, they propose that “the presence of nontraditional teachers, including individuals who may not have completed a four-year undergraduate program or volunteers whose responsibilities evolve over time, is a strength of the current ABE service system because it increases local community participation and diversity” (Sabatini, Ginsburg, and Russell 2002, 218). In other words, a higher-education requirement to certification in adult basic education may eliminate potential teachers from historically underrepresented backgrounds in education who may be uniquely qualified to work with adult learners.

INFLUENTIAL SOCIAL FORCES ON THE ADULT EDUCATION SYSTEM

Several social forces have shaped the development of adult education programs. Thomas Sticht (2002), an adult literacy researcher, provides an overview of the nearly four-hundred-year-old history of the adult education movement in the United States, as well as details about the various social, political, and legislative events that have shaped the adult education system’s formation (see also Reid, 1999). Sticht’s review highlights several social forces that have contributed to the development of the U.S. adult education system. Here we draw upon his observations about the role of the U.S. military, immigration patterns, the tension between a focus on liberal education versus human resource development in adult education, issues regarding equitable access to adult education services, and the debates regarding the definition of “literacy.” This discussion highlights the influence of multiple forces on the scope and mission of adult education programs.

The Role of the U.S. Military

One social force highlighted by Sticht (2002) is the U.S. military, which has played an important role

in the provision of literacy education for much of the twentieth century. The pervasive use of “intelligence testing” during the First World War drew attention to the low literacy skills of many young men and immigrant populations. This led to several advocacy efforts directing public attention and federal funds to literacy education. Teaching immigrants to read, in particular, was viewed in large part as an effort to *Americanize* the non-native born. The technology that enabled intelligence testing also gave rise to the General Educational Development (GED) standardized testing program in 1942, marking another significant military contribution to the field. The test enabled many armed servicemen who had dropped out of school to join the armed forces to complete their high school education and get jobs or pursue college degrees. Today, the GED represents the most widely used mechanism for high school certification in the United States. According to the American Council on Education (ACE) (2001), a total of 655,514 adults successfully passed the GED in 2001, a 31 percent increase over the number of successful test takers in 2000. Also, according to the American Council on Education (2001), one in seven high school graduates in the United States earned their degree by passing GED tests. Some famous GED recipients include comedian Bill Cosby, Olympic athlete Mary Lou Retton, actor Michael J. Fox, Delaware’s Governor Ruth Ann Minner, U.S. Senator Ben Nighthorse Campbell of Colorado, and founder of the Wendy’s restaurant chain Dave Thomas.

The Influence of Immigration Trends

Immigrant patterns represent another powerful social force with important implications for the expansion of the adult education system in the United States. The arrival of many immigrant and refugee groups in the 1970s prompted the creation of many adult English to Speakers of Other Languages (ESOL) programs. Academically oriented English language instruction was not viewed as an appropriate model as many of the newcomers had not learned to read and write in their first language and had little formal schooling experience (Wrigley and Guth 1992). ESOL programming attracted a new wave of attention in the 1980s with the passage of the *Immigration Reform and Control Act* (IRCA) in 1986 which required

immigrants to enroll in ESOL and citizenship classes in order to apply for amnesty (Wrigley and Guth 1992; Moriarty 1998). While immigrants compose the largest proportion of the overall enrollment in federally funded ESOL classes (U.S. Department of Education 1995), native-born U.S. citizens whose first language is one other than English also enroll in adult ESOL programs.

While the primary role of the adult ESOL professional is to help non-native English-speaking adults acquire English communication skills, in practice, the job often entails a myriad of other instructional and counseling efforts beyond language instruction, such as employment skills, survival skills, cultural beliefs and knowledge, U.S. history, and citizenship requirements (Florez 1997). Although the ESOL system has been providing adults with instructional guidance on topics such as U.S. history and citizenship test preparation for many years, these areas are now largely funded by designated monies under the English Literacy and Civics Education grants program instituted in 2000. The allocation of these monies has helped to expand the development of program curricula and lesson plans that combine civics education with English language and literacy development (Terrill 2000).

Liberal Education Enterprise or Human Resource Development?

Should the adult education system strive to provide adults with a comprehensive, liberal education or should it remain focused on providing low-literacy adults with the job skills needed to succeed in today’s workforce? (We use liberal here in terms of the expanding of the mind and acquiring new forms of knowledge, not in the political sense.) Since the era of the War on Poverty, Sticht (2002) observes, this question has been the focus of debate among many adult education policymakers and practitioners. With the passage of the *Workforce Investment Act of 1998*, the latter view appears to prevail currently. Proponents of the liberal education vision (e.g., Moule 1988; Center for the Study of Liberal Education for Adults 1969) argue that in today’s knowledge-based economy, adults benefit most from access to a liberal education, one that provides them with

general skills, critical thinking skills, and collaborative work skills, as well as an ability to work in interdisciplinary contexts. Liberal education, proponents further argue, should be made available to all adults, not only to traditional college-age students in four-year institutions. The human resource vision argues that aligning adult education instruction with the demands of real-world work environments will make adult education programs more appealing to adults, motivating them to acquire new skills and workplace competencies. There are concerns, however, that the adult education system has narrowed its focus to practical workforce skills in response to the inadequate funding and resources at the expense of other lifelong learning skills.

Issues in the Definition of Literacy

The variation in program design also reflects differing orientations towards the definition of literacy. Currently, there is also no single definition of literacy. According to adult ESOL experts Heide Wrigley and Gloria Guth (1992), this lack of agreement is viewed by some as a problem needing resolution, and by others as a healthy indicator of the diversity in literacy practices and cultural beliefs. Under the *Workforce Investment Act of 1998*, literacy is defined as “an individual’s ability to read, write, speak English, compute and solve problems at levels of proficiency necessary to function on the job, in the family of the individual and in society.” This definition is meant to account for the range of skills that goes beyond being able to read and write—those that adults need to get a job and carry out their responsibilities as family members and citizens. This definition is widely accepted by policymakers who recognize that many adults—even those who have a high school education—lack the skills to succeed in our fast-paced and complex information and technology-driven society (see Comings, Sum, and Uvin 2000). The focus on workforce preparation gains special urgency in light of the fact that 64 million people in the U.S. workforce between the ages of eighteen and sixty-four are in need of improved language skills, a high school diploma, or basic skills to meet the demands of the workplace (Comings, Reder, and Sum 2001).

LEARNING IN ADULT EDUCATION PROGRAMS

Adult education programs are highly diverse, which reflects the wide diversity of needs and goals in the adults who participate in these programs. This diversity also reflects the diversity in program mission and philosophy. For example, some program curricula concentrate on explicitly teaching general education development (GED) test content and test-taking strategies, while curricula in other GED programs try to avoid the dilemma of “teaching to the test” by organizing their curricula around state adult learning standards. In line with thinking on the social context of learning (e.g., Auerbach 1992; Fingeret 1983; Reder 1987; Hornberger and Hardman 1994), some programs aim to develop curricula that explicitly address issues of gender, race, and socioeconomic status. There is also an increasing recognition that, no matter what the particular curricular focus, all programs need to respond to the broadening focus in the last decade as federal policy has shifted from emphasizing basic skills instruction to promoting workforce skill development.

Adult education professionals are faced with multiple challenges in the conceptualization of programs and the development of curricula. They struggle to balance the recommendations of state curriculum frameworks and the increased demand, at the national and state level, for accountability and outcomes assessment. Program directors often must respond to calls for expanded integration of technology into the learning process as well as improved collaboration with other programs so that adult learners may transition more effectively from one program to the next.

Adult education scholars Sharan Merriam and Rosemary Caffarella (1999a, 1999b), among others (K. Taylor 2000; Brookfield 1995; Daloz 1999; Taylor, Marienau, and Fiddler 2000), emphasize the qualitative differences between learning in adulthood and learning in childhood, in terms of the learner, the context, and the learning process. In light of this perspective, we can understand why it is important not to hold the adult learner’s classroom experience to the same expectations we might hold for a child’s experience in a K–12 setting. A child’s education, Merriam and Caffarella (1999b) point out, is preparatory in nature: the

teacher is charged with making decisions about what skills and knowledge the child should learn. In contrast, the adult education curriculum necessarily introduces issues of learner agency and responsibility as adult learning is for the most part a voluntary enterprise. In other words, adults do not stay engaged in learning if the curriculum is meaningless to them.

This widely accepted tenet about the nature of adult learning is the starting point for several important unresolved questions about the nature of instruction and the role of the adult learner in the curriculum development process (Purcell-Gates, Degener, Jacobson, and Soler 2000). As mentioned earlier with respect to the system's struggle to define its target population and mission, these areas of tension—three of which are highlighted here—resist quick-fix approaches to their resolution.

Intensity and Duration of Instruction

Most adult learners juggle home, work, and family responsibilities while attending adult education programs. The adult education system recognizes these outside responsibilities and often offers a diverse schedule of classes throughout the week, at all times of the day, to be able to accommodate their learners' busy schedules. A limited number of studies suggest a logical relationship, that is, more hours of instruction and longer duration of participation leads to better achievement (Balmuth, 1987; Kassab, Askov, Weirauch, Grinder, and Van Horn, 2004; Kruidenier, 2002). Currently, there is no consensus in the adult education field as to what constitutes sufficient hours of instruction or adequate duration of instruction. According to Balmuth (1987), "sufficient time" not only enables learners to learn but also provides teachers with needed opportunities to do a good job teaching, which involves observing the learner, consulting other support staff, and finding other training and resources that meet the learner's needs.

The Role of the Adult Learner in Curriculum Decisions

Many adult educators and policymakers agree that the adult education curriculum needs to account for the learners' learning goals, prior experiences, back-

ground knowledge, and individual learning styles (Cook 1996; Crandall and Peyton 1993; Dirkx and Prenger 1997; Imel 1988; Wrigley and Guth 1992). Presently there is not consensus on the way or the extent to which information about the adult learners should be integrated into the curriculum. In other words, the process by which the effective integration of learner input takes place is not well understood. Nor is it clear how learner progress and persistence is affected by the nature of the learner's involvement.

Emphasizing the Teaching of Content or Learning Strategies

Adults, compared to children, bring a broader repertoire of resources to the second language learning process, including more advanced cognitive (Baker 1989) and metalinguistic abilities (Oxford and Scarcella 1994), and more diverse learning goals and expectations (Crandall and Peyton 1993). Adults also face a more compressed timeframe for learning a second language than young children (Young et al. 1994). For instruction to be optimally meaningful to the adult learner, should time be spent on teaching content and skills, or should time be spent on instilling lifelong learning habits and metacognitive strategies to promote independence in learning? Adult educators need a process by which to determine the optimal balance between the focus on content/skills and the focus on learning strategies.

ISSUES IN DEFINING THE ADULT LEARNER POPULATION

An understanding of the adult learner population goes beyond the demographic characteristics presented in the introduction. In fact, adult educators and policymakers do not agree on whether the adult education system is in fact serving the adult population that it is designed to serve. There are also disagreements about whether the system needs to expand or narrow the scope of its services in order to improve its efficacy as an educational organization. These areas of debate—of which four are highlighted here—provide evidence of the adult education system's ongoing struggle to define its mission and measure its successes.

Responding to Youth Enrollment

An increasing number of youth (referring to sixteen- and seventeen-year-olds) are enrolling in adult education programs (Hayes 2000). The increase, which remains under-researched and thus not clearly documented across states and programs, is attributed to several factors. For example, increases in the overall youth population result in a larger high school enrollment and a potentially higher rate of high school dropout. In addition, changes in welfare policy require more teenage recipients to enroll in adult education programs in order to receive aid. For many out-of-school youth who need high school credentials and workforce skills, adult education programs provide a reasonable educational alternative to high school completion. This may be a similar path taken by many academically struggling youth who seem to be “pushed out” of school when they fail to satisfy the rigorous graduation requirements instituted by educational reform efforts. Understanding the cause of the increase, Hayes (2000) points out, is less urgent than figuring out how to accommodate these younger learners at the program and classroom levels. On the one hand, the adult education system is poised to reaffirm its commitment to educating all learners. On the other hand, if academically struggling youth are not faring well in the K–12 system, they are unlikely to get the high-quality education that they deserve in the relatively under-resourced adult education system.

The Wait List Dilemma

Another area of struggle concerns the long wait lists maintained by many adult education programs. Data from states and individual programs indicate that wait lists can number in the thousands with wait times lasting several months or even years. In 1997, four million adults were enrolled in adult education classes but one million adults remained on wait lists (Tracy-Mumford 1999). The wait times are typically longest for ESOL programs compared to wait times for ABE or GED programs (National Center for ESL Literacy Education 1995, currently known as the Center for Adult English Language Acquisition). Many adult educators and policymakers view wait lists as symptomatic of an understaffed and underfunded

system. The wait list dilemma poses hard questions about the current philosophy and structure of the adult education system, as the solution may not simply be a function of funding more programs. Policymakers value wait lists because they provide leverage for requesting increases in program funds, but critics argue that wait lists do not benefit adult learners who never get to enroll.

The Case of Nonparticipants

A third area of struggle complements the focus on wait lists. There are high numbers of adults with limited literacy skills who are eligible to participate in adult education programs but choose *not* to enroll. These “targeted” adult learners are often referred to as nonparticipants or resisters. According to U.S. Department of Education data, only 8 percent of the eligible adults in 1990 were in fact enrolling in the available literacy, ABE, and GED programs (Pugsley 1990). Although the wait list issue (as described above) highlights the problems faced by adult English language learners who want to participate but cannot, the issue of nonparticipation is also relevant in the adult ESOL context as well. Data from the 1995 National Household Education Survey indicate that nearly 3 million adults were interested in attending ESOL classes but were not participating for a various reasons (Kwang, Collins, and McArthur 1997).

One pervasive assumption about nonparticipation is that the problem lies in the individual; this view contends that the individual dropped out of school and therefore, it is up to that individual to make the decision to return to school. This view of nonparticipation is strongly countered by B. Allan Quigley (1997), an expert in U.S. adult education policy and programming and one of the few researchers in the adult education field to investigate nonparticipation. Quigley argues instead that “ideological resistance” more likely explains why adults choose not to enroll. That is, adults with limited literacy skills often remember school as an extremely negative experience. Nonparticipants often cite cruel and unresponsive teachers, alienating school climates, and boredom as reasons that compelled them to drop out of school. Quigley is clear that nonparticipants strongly value education and aspire to complete their education despite their many bad memories of school

as an alienating and disengaging experience. The fact that many adult education programs still do resemble school only compounds their feelings of resistance. Quigley (1997) proposes that the adult education system needs to abandon its adherence to the traditional schooling model and better align itself with the needs and experiences of adult learners if the system is to attract nonparticipants and retain participants.

Issues of Access to Literacy Education

Under current law (Title II, of which the current *Workforce Investment Act* is a part), adult education providers are required to provide “direct and equitable access” to eligible adults. Equity issues are not new to the adult education field, which historically has been the primary provider of educational services to socioeconomically and culturally marginalized groups in U.S. society, such as the working poor, immigrants, or the incarcerated. Findings from the National Adult Literacy Survey (NALS) of 1992—perceived as the most comprehensive and statistically valid assessment of the nation’s literacy skills—presented a new opportunity to focus attention on inequities in adult literacy education. (In 2003 the National Assessment of Adult Literacy (NAAL)—an enhanced version of the NALS conducted a decade prior—was administered by the National Center for Education Statistics. At the time of publication, reports analyzing NAAL data had not been released.) The survey was designed to profile the nation’s literacy skills, using five levels of proficiency. Analyses conducted by adult literacy researcher Stephen Reder (1994) called attention to persistent gaps in literacy achievement between white and African American adults. Reder found that African American adults (75–80%) were disproportionately overrepresented in the lowest performing levels of the NALS compared to white adults (38–43%). Another disturbing trend highlighted by Reder is the gap in literacy performance for African American and white adults at different levels of educational background: on average, African American adults with college degrees scored similarly to those white adults with only a high school education. Reder also observed that, despite the narrowing gap in educational achievement between these two groups, there were no indicators that the gap in literacy achievement (as measured by the test) would be overcome. The NALS data

has provided the adult education field with an opportunity to address critical questions about equitable access in adult literacy instruction. For example, what steps are programs taking to address the barriers that may hinder the equitable access and participation of potential adult learners? How can adult educators ensure that their teaching upholds the spirit of the law regarding equitable access? According to Reder (1994), “we must support equity in functional literacy outcomes—not just equity in the amount of seat time or degrees obtained. Equity of literacy outcomes must become a policy and programmatic goal in itself, and a criterion for excellence in education” (What To Do section, para. 2).

In this section, we have attempted to highlight several issues of lingering debate about the mission and the targeted population of the adult basic education system. An important question to address might be: how will the adult education system measure its successes if it seems to be on an ongoing search for a clear mission? It is reasonable to assume that clarity of vision and goals is essential for any educational system to thrive. At the same time, adult educators have argued that it is precisely the great diversity of goals and visions that give the adult education system its vibrancy and strength.

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ADULT EDUCATION: SUMMARY AND IMPLICATIONS

In this entry, we first summarize the chapter. We highlight the need to develop stronger connections that bridge the fields of adult education and adult learning and development so that they can inform one another, which can help us, as a society, to attend to more effectively supporting adult learning. We discuss the implications of this work for policy, program design, and practice, and we detail a few activities for supporting adult learners in their quest to learn and grow.

Adult learners of the twenty-first century and the complex demands of this new technological age faced by adults, differ importantly from adult learners and conditions of prior centuries. Moreover, given

changes in immigration, work demands, and the ages at which people enter adult education, there is a lack of clarity as to *who* and *at what age* an individual is considered to be an adult learner. We have presented basic information and statistics concerning current enrollment in the adult education system, which shows clearly that while adult education is one of the areas of greatest growth in the U.S. educational system, it is sorely in need of increases in state and federal funding. In particular, we highlighted data from the Department of Education (Sticht 2004) that powerfully show the impact of investing in adult education. The lack of adequate funding for adult education is a chronic reality that we must address.

We have discussed key theories of adult learning as they emerged from the 1970s through the first years of this century. In exploring these frameworks we highlighted how different theories construct the nature of change, the key theoretical tenets, the focus of change, factors that contribute to or support those changes, and on whose experiences each theory was developed. We have illuminated the core principles of one central theory of adult development, constructive-developmental theory (Kegan 1982, 1994, 2000), and its distinguishing features among theories of adult learning.

Both types of theories are important and very useful in considering how to better support adult learning. Adult learning theories, for the most part, focus on changing *what* a person knows, their perspectives, and oftentimes their behaviors, while constructive-developmental theory (Kegan, 1982, 1994, 2000) focuses on the changes that can take place in *how* a person knows—changes in the structure of a person's underlying meaning system. These changes alter the very way a person takes in and understands his or her experiences. Great promise exists in employing theories of adult learning and adult development to adult basic education.

In presenting an overview of the theoretical history of adult learning and development theories, our goal was to show that fundamental principles of supporting effective adult learning and development have been the topic of scholarly discussion and research. These theories offer a wealth of knowledge and can be employed to inform adult basic educational practices. We believe that these theories provide an important backdrop for understanding and informing the continuing debates and complexities the current adult education system faces.

Making stronger connections between the field of adult basic education and adult learning and development is urgently needed. Theories of adult learning and adult development make clear that there are different types of changes possible when adults learn, and they also show us how the process of education can support these kinds of changes. These theories help us to understand how to support changes in skills, knowledge, reflective capacities, behaviors, and in ways of knowing. When adults are better supported in their learning in adult basic education programs, research has documented that they can generate new goals, new skills and competencies, and, in some cases, new understandings of themselves and their work (Drago-Severson 2004b; Kegan et al. 2001). This research illuminates how theories of adult learning and, in particular, a developmental perspective, can be a tool for better understanding how adult learners make sense of important aspects of their program experiences and how their learning influenced their lives as learners, workers, and parents.

Policymakers and practitioners would be wise to look to theories of adult learning and development to inform adult basic education programs, practices, and the policies that support them. This untapped resource holds great potential for strengthening adult basic education in meaningful and important ways.

IMPLICATIONS

There are important policy and practical implications to be drawn from using theories of adult learning and adult development to inform adult basic education practices. Applying these theories would shed new light on important ongoing debates and challenges in adult basic education as well as inform an understanding of learner experience and teacher practice.

Policy Implications

Thomas Sticht (2004) has illuminated the myriad of powerful benefits of human impact investment in the adult education system. Developing policies at the federal and state levels that increase their per-adult student expenditures will benefit the number of adults who are able to enroll in ABE programs, earn a high school diploma or GED equivalency, are able to se-

cure employment and/or advance in their jobs, enroll in other types of training, and receive public assistance.

However, new policies need to be created in order to support the use of theories of adult learning and development to inform ABE programs, practices, and curricula. A good first step would be to develop more effective policies to support teachers' professional development. These policies would create ongoing opportunities for teachers to learn about theories of adult learning and development so they could inform curricula and classroom practices. In particular, teacher professional development programs could help teachers engage in reflective practice (Brookfield 1995) and effective mentoring (Daloz 1999), and to develop an understanding of how to employ theories of adult learning and constructive-developmental theory (Drago-Severson 2004a, 2004b; Kegan 1982, 1994; Kegan et al. 2001) in order to support learners with different learning needs and ways of knowing.

If as a nation we want to witness adults changing in the ways that theories of adult learning and development make possible, then we must ask: Do we have enough supports in place to make seeing these kinds of changes a reality? Do we have the resources needed to make these changes happen for learners in the adult basic education system? And, do we have the needed resources to make these changes meaningful in the lives of adult learners?

More than financial support, however, it is necessary to make supports for these types of changes part of the fabric of the adult basic education system. Policy teaches us that in order for systemic change to occur, supports and structures must be established. Adult learning and adult development theories show us that the kinds of changes that are possible for adults in learning situations exist on many levels (e.g., psychological, emotional, and cognitive). These frameworks also emphasize the need for developing appropriate types of curricula and teacher practices. What types of teacher professional development programs might better support teachers as they embark on using these theories to inform their practice and curricula? How might adult basic education curricula more closely align with theories of adult learning and development? We are at a place in history where we need to begin using the richness of these well-established theories to inform adult basic education—and

we need policies that will support it. Doing so will lead to new insights and better ways of supporting adult learning.

Implications for Practice

Adult learning and adult developmental theories help us to understand the many ways in which learners' can change and grow over time—and how learners' understanding of and experiences in adult education programs can also change. These theoretical frameworks shed light on the differing criteria adults bring to the learning process and on the qualities and expectations they hold for their teachers. In addition, these theories can help teachers develop classroom practices and conditions that are likely to support the diversity of adult learners and their learning needs. Using them to inform practice can also help teachers to understand better how to adjust their own teaching styles. In addition, these theories emphasize the importance of creating bridges that anchor, support, and challenge adult learners in ways that enhance learning and growth. How might adult education programs create such bridges?

As adult educators, we need multiple ways to attend to adults' learning needs, and curricula that help learners reflect on their learning by connecting it with their personal and professional lives (i.e., work and their lives within and outside of the workplace). Employing practices that support self-reflection can be helpful in two ways. First, a space is made for learners to reflect on their lives and issues of importance to them (Knowles 1984) and to develop a new relationship to their own thinking and assumptions (Brookfield 1987; Kegan 1982, 1994, 2000; Mezirow 2000). Second, educators also learn how to better support and challenge adults as they strive to become more empowered citizens and workers who can meet the demands of the twenty-first century workplace. Creating these opportunities will enhance possibilities for them as learners and workers, and for us as a society.

In order for adults to grow and learn, it is important to create contextualized curricula and opportunities that enable them to challenge their own assumptions, reflect on their experiences and share their work with others (see Table 19.1). More specifically, theories of adult learning and adult development can be employed to inform curriculum

development. For example, developing contextualized curricula (Freire 1970), where adults are invited to engage with issues of importance to them and their lives as citizens, workers, and parents, would support their learning in meaningful ways. Creating curricula that centers on inviting adults to reflect on their learning goals, personal goals, and role-specific goals (e.g., work goals and parenting goals) could support learners with different needs (see e.g., Drago-Severson 2004a, 2004b; Stein 2000, 2002). Learners might also be encouraged to formulate new goals after participating in this process. Exercises (written and oral) that encourage adults to reflect on applying the skills learned in class to real-life situations can support development (e.g., creating opportunities to apply math principles to assist adults in figuring out financing for buying homes, mortgages). These exercises create opportunities for adults to unearth assumptions, achieve a new relationship to their thinking and, over time, to see new ways of thinking and behaving (Brookfield 1987; Kegan 1982, 1994, 2000). Creating opportunities where learners are invited to share these exercises with teachers and classmates can support the development of classroom community, but can also help adults consider alternative ways of thinking as they benefit from peer and teacher feedback and questions (Drago-Severson 2004a, 2004b).

In addition, research and theory (Daloiz 1983, 1986, 1999) indicate that mentoring can be a support to learning. Developing mentoring relationships (teacher-student, student to student) in adult basic education programs could serve as another needed support for the types of changes described in this chapter.

Implications for Program Design

Research has shown (Drago-Severson 2004b; Kegan et al. 2001) that building cohorts (i.e., tight-knit groups of adults who share a common purpose), or a variation of them, into program designs supports adult learning, and oftentimes development, in powerful ways. Participating in learner cohorts has been documented as having academic, emotional, and cognitive benefits in adults. This program feature has important implications for both program design and teacher practice. It suggests how ABE practitioners might structure classroom environments to better support adults

Table 19.1

Activities for Enhancing Learning

1. Invite learners to periodically write about their goals and to share their writing in collaborative groups (for a full description, please see Drago-Severson 2004b).
2. Invite learners to write or discuss ethical questions or dilemmas they encounter in their lives. Invite them to share their ideas with their peers. (see, e.g., Taylor 2000).
3. Invite learners to create their educational life histories (see, e.g., Rossiter 1999).
4. Engage learners in self-assessment, using what learners develop together as their own criteria for assessing "good work" (Taylor 2000, 165).

who make sense of their experiences in qualitatively different ways of knowing. While working and learning in cohorts has demonstrated benefit for adults, it may not be realistic to build consistent and enduring cohort structures into all programs, given the complexities of adults' lives, program limitations, and funding requirements. Therefore, ABE programs would be wise to include as many cohort features as possible into existing program designs to enhance learning, support the development of classroom community, and possibly increase learner retention rates (Drago-Severson 2004b).

We hope that this chapter illuminates the importance of and the urgent need to strengthen adult basic education by using what we have learned from theories of adult learning and adult development. These theories teach us how adults learn and the kinds of supports, challenges, and processes that lead to meaningful changes in our lives.

In our research, we often heard adult learners say that it was "harder" for them to learn in their adult basic education programs because they were "adults" or "grown-ups" with multiple responsibilities (Drago-Severson 2004b; Kegan et al. 2001). Often we heard learners say how proud they were of themselves for being able to "stick with" learning in the programs even when they doubted their abilities. Support from family, classmates, teachers, co-workers, and supervisors gave them the encouragement they needed to continue. Hope, an adult learner originally from the Caribbean who was elected commencement speaker for her graduating class, spoke about the profound difference the kind of learning described in this chapter made for her and others in a high school diploma program. As Hope explained, "You are never too old

and it is never too late to get an education. Life is full of opportunities; you just have to reach out and grab one. Never give up your dreams” (Drago-Severson 2004b, 184).

We hope that this exploration strengthens understanding and supports to adult learning in adult basic education. We also hope that it enables us to move closer to creating learning environments where adult

learners, with diverse needs and ways of knowing, can grow and learn in the ways described in this chapter. It is up to policymakers and practitioners to make effective use of the richness that theories of adult learning and development have to offer so that dreams like Hope’s can be realized across our nation.

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CURRENT ISSUES IN HIGHER EDUCATION

Higher education is at the crossroads, facing demographic changes, on-demand learning, and privatization. Each of these issues is discussed in the following entries dealing with for-profit higher education institutions, academic ownership, and student diversity. The issues of for-profit institutions, academic ownership and property, and student diversity are examined thoroughly in light of political, socioeconomic, and technological changes of traditional public and private colleges and universities. Changes in societal attitudes and technological advances have allowed for innovative structures to be developed in higher education. The educational opportunities that have arisen provide a gateway to both nontraditional and traditional college students seeking a college education. Programs that are now becoming more performance-based are beginning to gain a foothold in higher education. It can be demonstrated that these performance-based programs have been initiated by the standards-based movement, which has migrated from primary and secondary schools and has infiltrated institutions of higher education. The new performance-based programs are well suited to employers who are more concerned with what candidates can do rather than what they were supposed to have learned.

For-profit institutions of higher education, the first theme of this chapter, have gained national attention. The college or university, which the public has taken for granted to be a traditionally not-for-profit institution, has become an increasingly attractive for-profit business proposition. For-profit institutions have successfully integrated a business model to compete aggressively in the higher academic arena. It is clear that privatization is increasingly palatable to private sector investors who consider higher education to be a good investment. What started out as

family-owned businesses expanded into large education corporations whose stock is traded on Wall Street. Over 4,300 for-profit higher education institutions operate campuses throughout the United States with national and international locations. Large corporations such as the Apollo Group, which owns and operates over 150 campuses, Corinthian Colleges with eighty-one campuses, and Kaplan Higher Education with forty-seven campuses are examples of successful for-profit higher education institutions. The University of Phoenix, owned by the Apollo Group, with its 130 campuses, has a total enrollment of 175,000 students. What has made these for-profit institutions of higher education so attractive to private investment is the reciprocal relationship between the economy and the sale of credit hours. To be sure, a paradox exists between higher education and the general economy. When the economy is poor, more seats in institutions of higher education are sold. This makes higher education a good hedge against other investments. With society becoming more technologically advanced, careers that at one time either required on-the-job training or a high school diploma may now require college-level education.

The second theme discussed in this chapter has to do with the rights of ownership of academic work. The entry on ownership of academic knowledge discusses issues of faculty copyrights and the “work for hire” doctrine, faculty ownership of lectures, orders of authorship, plagiarism, patent ownership, and technology transfers, inventorship, parsing patent rights, and promoting the public domain. Since 1975, increases in interest and litigation regarding each of these issues have taken place in higher education. Intellectual property claims are generally expressed through copyrights or patents. It is generally accepted that copyrights protect expressions of an idea while

patents claim legal ownership of an idea. The holding of copyrights and patents by faculty has led to increasing controversy regarding claims of ownership of academic work. Faculty copyrights and the “work for hire” doctrine are also discussed with regard to their particular meaning in higher education.

It is interesting to note the differences in the “work for hire” doctrine when applied to the academy as opposed to other work environments. Other issues of ownership concerning distance education and how technology may change our present understanding of ownership of academic lectures and demonstrations are also discussed. Parallel to this phenomenon is the growth of the technology-based business involving partnerships between institutions of higher education and private companies. The increase in business-related investment in university research has also complicated intellectual property rights. Coupled with a desire for continued economic growth and pressures from international competition, the concepts of intellectual property rights and the American patent system are constantly questioned by the general public.

The third and final theme in this chapter has to do with increasing student diversity in American higher education. The entry on student diversity discusses social and historical issues, the evolution of diversity on campuses, and research synthesis on diversity. The first step toward increasing diversity on campuses is to recognize the barriers that may unfairly discriminate against certain segments of the population. All colleges and universities receiving federal and state funding have adopted principles of equity that prohibit discrimination on the basis of sexual orientation, cultural or ethnic background, and physical or learning disabilities. A 1996 report sponsored by the National Association of Scholars reported that 50 percent of the fifty top-ranked colleges and universities had diversity requirements (NAS 1996). In a 1992 survey of 196 colleges and universities, one-third had a multicultural general education requirement (Levine and Cureton 1992).

In reviewing the mission statements of institutions of higher education, one generally finds comments related to the promotion of diverse student and faculty bodies. Past college practices, which have embraced affirmative action as a method of increasing diversity, have been challenged. However, recent court decisions have determined that admission decisions

based on a minority category can be an acceptable means of achieving campus diversity. In support, the United States Supreme Court determined that diversity assumes an important role in certain considerations for college entrance. Outcomes of arguments from the University of Michigan at Ann Arbor report that diversity enhances all students’ experiences at the college or university. As Peter Schmidt (2004) reports, “The U.S. Supreme Court decided two law suits involving race-conscious admissions policies [as a way to increase diversity] of the University of Michigan at Ann Arbor.” This was considered “a victory for affirmative action because the court had accepted [the University of] Michigan’s basic argument that the educational benefits of diversity justify the consideration of race in college admissions decisions” (p. A17). The entry on diversity in higher education concludes with the benefits that students receive from learning in culturally diverse settings. It is clear from the entry that systematic procedures and policies need to be developed and implemented if equity and justice are going to be achieved in American institutions of higher education.

Stephen J. Farenga and Daniel Ness

FOR-PROFIT HIGHER EDUCATION

For-profit higher education refers to private, postsecondary institutions that may use excess net earnings to compensate their owners for the assumption of risk. Individuals in control of not-for-profit institutions of higher education, in contrast, can receive no compensation other than wages and expenses. Despite serving a rather small proportion of the student market, higher education’s for-profit sector has attracted attention as an alternative to the not-for-profit models employed by more traditional public and private colleges and universities. For-profit institutions have a reputation for using a distinctive academic model to aggressively compete for students enrolled in employment-related education and training programs. Since a few of the largest for-profit providers have tended to be the focus of the discussion, however, the aggressive nature of the sector’s competitiveness is probably overstated, and the variety of academic models these institutions employ is probably understated. For-profit

institutions are an increasingly important part of the postsecondary landscape, and are indicative of the diversity of missions and values connected to higher education in the United States, and of the global expansion of private higher education.

A BRIEF HISTORY OF FOR-PROFIT HIGHER EDUCATION

Many observers of higher education incorrectly refer to for-profit higher education as a new or emerging phenomenon. Historically, in the entrepreneurial United States, profit making and education were not incompatible. Several current for-profit institutions have origins that go back more than a century. In fact, earning a profit was the goal of the first college proposed in the American colonies: the Virginia Company's college at Henrico in 1617. Inauspiciously, the funds raised for this early corporate effort in higher education were diverted for other purposes, and the institution was never established. Through the nineteenth century, however, for-profit providers contributed significantly to training students in the skills and trades demanded by the Industrial Revolution, and were important educators of doctors, lawyers, teachers, and businessmen. As the demand for publicly supported education increased in the latter half of the nineteenth century, for-profit higher education began to be pushed to the margins of educational practice. In the early twentieth century the progressive ideals of education as a public trust became firmly established, and higher education was increasingly dominated by public institutions, especially community colleges. For-profit higher education could not easily compete with these widely available and very inexpensive postsecondary options, and retained a significant presence primarily in low-level training programs symbolized by the much maligned matchbook cover advertisements.

In the 1960s and 1970s the competitive position of for-profit higher education began to improve. The baby boom generation entered college in droves, increasing demand beyond the capacity of existing institutions. The 1972 reauthorization of the Higher Education Act provided federal financial aid for college students, giving for-profit higher education essentially the same access to these funds as public and private not-for-profit educational institutions. Regional accreditors began accrediting for-profit institutions in the mid-1970s, al-

lowing them new avenues of legitimacy as real colleges and universities. And finally, college began to take the place of high school as the gateway to entry-level employment and career advancement, leading adult students and others to seek access to a career-focused postsecondary education. Since then, the current era of for-profit higher education has been marked by growth and expansion, though the notion of providing education for private gain rather than for the public good remains unconventional.

FOR-PROFIT HIGHER EDUCATION TODAY

Today, for-profit institutions of higher education continue to focus on training students for occupations and professions, while including limited coursework in general education or the liberal arts. According to the National Center for Education Statistics, there are approximately 760,000 students enrolled in 4,300 for-profit institutions of higher education in the United States. This represents about half of all U.S. postsecondary institutions, but only 5 percent of the total student enrollment. About eight hundred for-profit institutions granted 120,000 degrees in 2001: 65 percent of the students earned associate degrees, 22 percent earned bachelor's, 12 percent earned master's, and less than 1 percent earned doctoral degrees. While representing a minority of the for-profit sector, degree-granting institutions have been most associated with the growth of for-profit higher education since the 1970s (U.S. Department of Education 2003).

The faculty at for-profit institutions generally have extensive professional experience, and are often hired as part-time instructors while maintaining full-time employment in their field. Traditionally, faculty at not-for-profit private and public institutions have primary responsibility for planning the curriculum. That is much less common in the for-profit sector, where the programs are more often determined by market demand and the need for cost control than the interest of an individual faculty member. Still, most degree-granting for-profit institutions do include faculty in program and curricular design discussions, particularly at those schools with regional or national accreditation. For-profit institutions expect their faculty to primarily serve as teachers, however, rather than as curriculum designers. In addition,

faculty are rarely paid to be scholars or researchers, though some for-profit institutions do encourage faculty to publish in academic journals and present at scholarly conferences.

Many for-profit institutions take advantage of new technologies to offer programs at a distance. While it is important to note that not-for-profit private and public institutions are engaged in distance education as well, it is a rather prominent aspect of the for-profit sector. Most of the for-profit online or “virtual” universities operate as either stand-alone institutions, like Capella University and Jones International University, or exist as a division of a campus-based institution, such as the University of Phoenix Online and the Online Division of American InterContinental University. Many for-profit distance education ventures that were prominent during the dot-com boom of the late 1990s, such as Fathom.com and HungryMinds.com, attempted to develop and/or market the educational products of not-for-profit colleges and universities. Few of these still exist. A more nefarious brand of for-profit distance education company is known as a “diploma mill.” Unaccredited institutions that sell bogus degrees based on little or no academic work, diploma mills are considered fraudulent organizations and are generally not counted with institutions in the legitimate for-profit higher education sector.

As has been the case historically, most for-profit institutions in the United States are family-owned small businesses. They continue to provide career-oriented education to students much as their predecessors did, with relatively small enrollments and fairly traditional academic models. Beginning in the 1990s, however, a new breed of corporate higher education emerged. With growing enrollments and unconventional academic practices, these organizations have dominated the discussion and debate surrounding the modern rise of for-profit postsecondary institutions. Driven by Wall Street’s demand for continuous expansion, about a dozen higher education corporations are establishing new campuses throughout the United States and internationally, and have developed a strategy of purchasing smaller, independent for-profit schools and placing them under central corporate management. Some of the more prominent higher education corporations include The Apollo Group (which owns over 150 campuses), Corinthian Colleges (81 campuses), ITT Educational

Services (77 campuses), Career Education Corporation (75 campuses), Education Management Corporation (65 campuses), DeVry (58 campuses), Kaplan Higher Education (47 campuses), Strayer Education (28 campuses), and Sylvan Learning Systems (26 campuses). The colleges and universities owned by these corporations include American InterContinental University, Argosy University, The Art Institutes, Concord Law School, DeVry University, ITT Technical Institutes, Kaplan College, National Technological University, Strayer University, The University of Phoenix, and Walden University. The University of Phoenix alone has over 130 campuses in thirty states and Canada, with a total enrollment of 175,000 students. Owned by the Apollo Group, it is the largest private university in the United States, and has more than three times the enrollment of even the largest public universities.

There is a distinctive academic model associated with for-profit institutions of higher education that largely reflects the practices of these new corporations. The model involves four components. First, for-profit institutions offer programs narrowly targeted to serve nontraditional students (part-timers, working students, and adults) seeking employment in high-demand fields. They do not offer the residential campus experience of many four-year institutions, nor the broad general education suitable for a student straight out of high school. Second, the for-profit curriculum is developed and managed administratively to serve institutional goals. The faculty may be involved in curricular matters at a for-profit college or university, but they do not maintain the extensive curricular prerogatives of their colleagues in the not-for-profit private and public sectors. Third, rather than employing a full-time faculty of professional academics, for-profit institutions hire instructors with career credentials to teach individual courses. Few offer tenure to their faculty, and current experience in the field is more important than academic credentials in the for-profit classroom. Finally, for-profit institutions offer courses on an accelerated schedule, allowing students to finish their course work much quicker than the traditional ten- or fifteen-week semester calendar allows. While none of these characteristics is unique to the for-profit sector or universal within it, together they suggest an innovative—and controversial—model for the provision of higher education.

IMPLICATIONS OF FOR-PROFIT HIGHER EDUCATION

This combination of innovation and controversy is what draws attention to for-profit higher education beyond what might be suggested by its size relative to its not-for-profit peers. For-profit higher education raises significant questions regarding education as a public good, academic integrity and legitimacy, and the influences of market forces on the curriculum. In much of the recent literature on the subject, for-profit higher education is described as transformational, though the positive or negative evaluation of that transformation can often be ascribed to the prior biases of the observer. It is clear, however, that larger trends of privatization are influencing the growth of for-profit higher education, both domestically and internationally. This suggests that these institutions are less the cause of a transformation than evidence of it.

The future of for-profit higher education, then, seems to be following its history. As society began envisioning the provision of education as a public trust, for-profit institutions saw their fortunes wane. Now, as the ability of private enterprise to serve public ends gains acceptance, the provision of higher education for a profit seems to fit the spirit of the times.

Kevin Kinser

OWNERSHIP OF ACADEMIC KNOWLEDGE

Professors and universities have claimed intellectual property rights in various forms of academic work almost since the inception of modern intellectual property law. Those claims have become increasingly controversial, however, as the academy adapts to the emergence of an information economy in which academic knowledge is a valuable source of revenue.

ACADEMIC COPYRIGHTS

Intellectual property claims in academic work take two principal forms: copyrights and patents. Copyright law protects the *expression* of an idea, rather than the idea

itself, by giving an author exclusive rights in his or her works, including the rights to reproduce the works, to prepare derivative works, to distribute copies or recordings, and to display the works publicly. That protection lasts for many decades: a work created today is protected by copyright for the entire life of the author plus seventy years or, if the work is anonymous or created under a “work for hire” agreement, for ninety-five years from publication or 120 years from creation, whichever is shorter.

These rights derive from a seventeenth-century royal monopoly on printing granted to the British Stationers’ Company. In the second half of the seventeenth century, printers and authors argued that a similar monopoly should be granted to authors. Their efforts culminated in the 1710 Statute of Anne, which granted to authors a copyright in their registered works for up to twenty-eight years.

The United States Constitution directed Congress to “promote the progress of science and the useful arts by securing for limited time to authors and inventors the exclusive right to their respective writings and discoveries.” (U.S. Const. art I, sec. 8). Congress enacted the first Federal copyright law in May 1790.

Faculty Copyrights and the “Work for Hire” Doctrine

Faculty, rather than research institutions, are the owners of most copyrightable scholarly works. Nonacademics sometimes find this surprising, for faculty works could be considered “works for hire.” Under work for hire doctrine, copyrightable works produced by employees in the scope of their employment are the property of the employer. Commissioned works may also fall under this rule, depending on the nature of the work and the extent of direction and motivation supplied by the person commissioning the work. The legal question in both instances is, who has the “right to control the manner and means by which the product is accomplished” (*Committee for Creative Non-Violence v. Reid* 1989).

Professors are university employees for most purposes (Kulkarni 1995; Burk 1997). Treating their works as works for hire, however, would mean that universities could assert copyright in those works. Such institutional copyrights could be a threat to academic freedom because an institution could use

its copyright to prevent or require distribution of a work. Many university copyright policies, therefore, explicitly state that faculty own the copyright to “traditional scholarly works”—including research articles, books, and teaching materials—made by “independent academic effort.”

The policy of treating faculty works as exceptions to work-for-hire rules is not universal. Some educational institutions assert copyright in works created by faculty in distance education programs. Faculty in these programs argue that these institutional copyrights undermine academic freedom, and the matter has not yet been resolved. Even in institutions that follow the traditional rule, moreover, the increasing use of new technologies has made it more difficult to define traditional scholarly works and independent academic effort. For example, extensive university resources (e.g., staff, computers, software) may be needed to develop and use new media technologies for teaching, such as web pages. The use of these resources could provide a basis for a university to assert that it substantially controlled the production of the work, meaning the work in question would look more like a traditional work for hire than a traditional scholarly work.

Notwithstanding these developments, the tradition of assigning copyright in scholarly works to faculty continues to find support in a legal doctrine called the “academic exception.” This doctrine, which treats teachers and other academicians as uniquely exempt from work-for-hire law, was developed in part through lawsuits brought by faculty lecturers.

Faculty Ownership of Lectures

One of the earliest recorded copyright disputes involving lectures occurred in Scotland in the late 1800s, between a bookseller, William S. Sime, and a philosophy professor, Edward Caird. Without permission, Sime used student notes to reproduce Caird’s lectures, which he sold under the title “Aids to the Study of Moral Philosophy.” Sime listed the student who took the notes, William Finlay Brown, as the author. The outraged professor promptly sued for copyright infringement. The House of Lords and Privy Council ruled in Caird’s favor, and in the process set a clear precedent for faculty ownership of lectures (*Caird v. Sime* 1887).

The *Caird v. Sime* ruling was left virtually unquestioned in British and American law until the late 1960s, when enterprising optometrist J. Edwin Weisser started a lecture note-taking service at the University of California, Los Angeles (*Williams v. Weisser* 1969). With approval from the Dean of Students, Weisser hired students to audit courses, take notes, and pass those notes on to him. Weisser copied the notes and sold them to other students. Anthropology professor B. J. Williams sued Weisser for copyright infringement based on notes taken by a student in his class. Weisser argued that the lectures belonged to the university rather than Williams, on a work-for-hire theory. The court rejected that theory and held that university professors hold copyright in their lectures (*idem*).

The issue came up again in the late 1990s, when various private companies began to hire students to take notes and then placed those notes on the Internet. Universities around the country soon threatened lawsuits for copyright infringement against these companies. Because these companies quickly went out of business due to an economic downturn, the issue was rendered moot.

Orders of Authorship

Copyright law acknowledges that some works are collaborative, such as a research paper produced by the shared effort of a student and a professor. All identifiable contributors are considered equal authors and owners of a joint work, with an undivided right of ownership in that work. To be identified as a joint author, however, each individual must have contributed an independently copyrightable element. In addition, each author is granted property rights in the work as if he or she were the sole author. Authorship, therefore, is “shared” only in an economic sense. For example, creators are not obliged to consult with other authors regarding subsequent use of the work as long as they “share” the profits of that use.

Copyright law diverges somewhat from academic practice in its definition of “the author,” for named authorship of an academic work can sometimes derive from the contribution of elements that are not independently copyrightable, such as the provision of research funding or minor editing. In many disciplines, for example, student and postdoctoral researchers will list as an author the principal

investigator who received the grant that funded the research that led to the paper, whether or not the investigator participated in the research itself. For this reason, it is not always clear that an individual listed as an author of a work would be treated as such in a court of law.

Copyright law's treatment of joint authors as equal owners of the work, with equal use rights, also diverges from academic practice, for in academia authorship is often ranked. Thus, for example, the most important contributor to an academic paper often will be placed first in the list of authors. "First authors" are understood to be primarily responsible for the work, and therefore the real "owners" of the work, deserving the honor and/or criticism the work merits. At the same time, the last-named author, if he or she is the principal investigator of the lab within which the work was produced, may have as much or more control as the first author over how and when a work is published.

Plagiarism

Copyright law is not the only means by which academicians claim a kind of ownership interest in their creative expression. In fact, theft of a work in academic circles is often called plagiarism rather than copyright infringement. Both terms refer to the improper reproduction of all or part of a work, but they differ with regard to the nature of the violation. Copyright infringement cases tend to focus on "the work," and particularly the existence of substantial similarity between the original and the infringing work. Guilt depends on the fairly extensive borrowing of explicit expression, and it is not excused by attribution. Plagiarism, by contrast, involves ideas as well as expression, explicit borrowing may be slight or nonexistent, and attribution will often resolve the issue. This last aspect reflects a different valuation system with a much older pedigree. Condemnation of plagiarism in this sense was present in ancient Rome and Greece, where "literary theft" was viewed as an appropriation of another's honor and "immortal fame" (Long 1991, 856). The term derives from *plagiarius*, to kidnap, and it signifies breaking a connection between the author's name and the work (Stearns 1992; St. Onge 1988).

Yet the connection between the name and the work also marks a point of shared meaning between pla-

giarism and copyright, for a tight linkage between authorial identity and authorial property is one of the pillars of modern copyright. Seventeenth- and eighteenth-century copyright advocates constructed the work as the embodiment of the author, "the objectification of the writer's self" (Rose 1993, 121). The object itself could be copied, and the ideas within it circulated, but the author's expression remained her own. Thus copyright, like plagiarism, historically acknowledges an intimate relationship between property and identity.

Plagiarism usually is punished by extralegal means. For example, a plagiarist may be fired, shunned by his or her colleagues, or, if he or she is a student, expelled from the university. Legal action is possible in some cases, however, under laws designed to prevent scientific fraud.

OWNERSHIP OF ACADEMIC INVENTIONS

Academics may claim ownership of their *expressions* through copyright law, but they usually claim legal ownership of their *ideas* through patent law. Patent law finds its roots in early modern Europe. Seeking to encourage the importation of knowledge to their communities (even as they sought to contain its exportation), fifteenth-century Italian city-states awarded limited monopolies to individuals for novel and/or innovative techniques and machines. Noting the success of the practice, other European countries followed suit. United States patent laws were patterned on Britain's Statute of Monopolies of 1623, which granted a fourteen-year monopoly to the "first and true inventors" of "new manufactures."

A patent grants to an inventor the right to exclude others from making, using, or selling his or her invention. To be patentable, the invention usually must be a novel, useful, and nonobvious process, machine, article of manufacture, composition of matter, or any new or useful improvement thereof, created by a human. The monopoly generally lasts twenty years from the date an application for the patent is filed in the United States Patent Office.

Because patents are supposed to encourage progress, an inventor must prove that her idea is a new contribution to the human fund of knowledge. But novelty is not enough—the idea also must be nonobvious to a person of "ordinary skill in the art"

(1623). Finally, the invention must “do” something—it must accomplish a useful task.

Patent Ownership and Technology Transfer

Unlike traditional scholarly works, faculty inventions produced with university resources are rarely owned exclusively by the creator. Through a combination of policy and law, professors and universities share ownership of academic inventions and work together to transfer that knowledge to the private sector through patenting and licensing arrangements. These arrangements are commonly described as “technology transfer.”

Patenting of university inventions is not a new phenomenon. Several U.S. universities had limited programs and foundations dedicated to the administration of patents based on university research in place in the 1920s. These programs were often portrayed as necessary to prevent the unethical exploitation of research. Yale University professor Yendell Henderson, writing in *Science* in 1933, put the argument as follows.

It is properly the business of the creative scholar to see to it that, if possible, his ideas serve mankind in his own generation . . . he should [also] see to it that his invention is not misused. He should control it. He should find one or more high-grade concerns to develop it. He should afford them at least such little protection as a patent gives against cut-throat competition [and thereby] so far as possible prevent the sale of inferior or harmful imitations.” (in Palmer 1947, 82)

Most of these programs were relatively small, however, reflecting a persistent institutional ambivalence about the patenting of inventions.

Today, by contrast, universities actively promote technology transfer. Indeed, Henry Etzkowitz and Loet Leydesdorff (1997) argue that the universities are now equally interested in the advancement and the commodification of knowledge. Through patenting of inventions discovered in the course of academic research, consulting arrangements, and the formation of “incubators” for new technology companies, entrepreneurial professors and their universities have become active participants in the information economy.

The roots of this development lie in the confluence

of several events in the 1970s and 1980s. First, the growth of new technology-based businesses around the University of California at Berkeley, Stanford University, and the Massachusetts Institute of Technology called attention to university contributions to economic growth. Second, private companies seeking participation in that economic growth by developing inventions arising from federally sponsored research found their efforts frustrated by complex and sometimes arbitrary licensing rules. Meanwhile, industrial investment in university research increased, and private companies began to demand intellectual property rights in the research they themselves sponsored. Finally, the economic growth of Japan and Germany, coupled with high inflation and recession in the United States, sparked a national discussion of the sources of U.S. economic growth or lack thereof—including one of the accepted pillars of American ingenuity, the patent system.

In 1980, Congress responded to these events by passing the *Bayh-Dole Act*. Under the provisions of the act, research institutions now have a clear first claim to patent rights in inventions that emerge from research financed by the federal government. These patent rights may be licensed to private entities that wish to develop and market the inventions. If the institution chooses not to pursue a patent on a given invention, ownership reverts to the funding agency, which may assign it to the inventor.

Several other developments in the 1980s laid the final groundwork for a surge in technology transfer. First, the Supreme Court decisions rendered patentable both living organisms and software, substantially expanding the subject matter available to university technology transfer offices. Second, universities scrambling to respond to a decrease in federal research funding became more interested in patenting and licensing as a way to generate revenue, demonstrate the continuing usefulness of the university to the nation, and develop relationships with potential industrial “partners.”

These efforts have paid off, for universities now earn millions in royalties from patented inventions. A portion (usually a third) of these funds goes to the professor-inventors, but the royalties are also used to support further research. While this revenue stream is still small compared to a major university’s research budget, it is enough to encourage further technology transfer efforts.

Inventorship

Inventorship is a frequent challenge to efforts to patent academic knowledge. Unlike copyright law, which allows more than one individual to own a song if each individual can prove he or she produced it independently, patent law only permits the “original and first” inventor(s) to claim property rights. (See McSherry 2003.) Applications must be filed in the name(s) of the inventor(s), who take an oath affirming that they indeed fit the statutory description. If the inventorship is incorrect, the patent can be invalidated.

Under U.S. law, only the individual(s) who conceived the invention and reduced it to practice may be called “inventors.” Because academic research is often done in a group context, it can be difficult to identify the inventor of a given invention. This problem is exacerbated by the hierarchical nature of academic research. Professors may insist on being named as inventors even where they are not involved in the conception or reduction to practice of the invention, because they would normally be named as authors in any publication arising from the same research. Attorneys and university administrators must therefore work closely with university researchers to determine the legal inventor of any invention resulting from academic research.

Parsing Patent Rights

Determination of the direct and indirect claimants to patent rights in an invention can be equally challenging. Most universities claim patent rights in any invention developed using their resources. Under some circumstances, however, private entities may contract for a specific piece of research and obtain rights in any invention arising from that research. Another research institution may have certain rights if, for example, a researcher visiting from that institution played a part in the invention. Finally, an inventor may claim that the invention was developed through a consulting arrangement rather than with university resources. To forestall conflicting claims, some universities ask scholars to keep careful track of the uses of their professional knowledge and skills, as well as university equipment.

Universities and researchers must also keep track of the use of patented research tools, for companies that

provide patented materials for use in university research sometimes attempt to use their patents to claim rights in inventions arising from that research. In the mid-1990s, for example, a pharmaceutical company sought to force all universities using its patented research tool to assign to the company rights in inventions developed using that tool, and forbade researchers from providing the materials to any university that refused to agree to its terms. Many universities capitulated, but the National Institute of Health, Harvard University, and the University of California refused. The company eventually withdrew its demands.

PROMOTING THE PUBLIC DOMAIN

Some members of the academy and the general public object to the assertion of intellectual property rights in academic work, because they believe such claims undermine the status of academic research as a public resource. From this perspective, that public resource should be sustained by a gift economy based on the reciprocal and personalized exchange of gifts—such as research papers—rather than the marketing of private property.

Other professors, as well as universities, respond that they can only preserve academic knowledge as a public resource by treating it as private property. Every form of intellectual property relies on and takes from a public domain of knowledge. Because the public domain is understood as a kind of space of free appropriation, however, it is difficult to ensure that an idea, left “unprotected,” will not be appropriated by a private entity as its own. Even published ideas can be reworked by new “inventors,” and a patent on that “new” idea used to limit commercial and even noncommercial use of the original idea. By claiming intellectual property rights in their works—nominally withdrawing them from the public domain—professors can help ensure that those works remain publicly available.

This latter view is reflected in another new trend in ownership of academic knowledge: efforts to use intellectual property rights to promote a “knowledge commons.” For example, the Massachusetts Institute of Technology has established a system for licensing its copyrighted course materials free of charge. Users must agree that their use will be noncommercial, that full credit will be given to MIT and, if appropriate, the professor who developed the materials, and

that any derivative works based on the materials will be offered on the same terms.

INTELLECTUAL PROPERTY MANAGEMENT AND THE ACADEMY TODAY

Thirty years ago, ownership of academic knowledge was of little concern to most scholars and administrators. Today, university presidents identify ethical management of intellectual property as one of the principal duties of the academy (Kennedy 1997). Fulfilling that duty has led to the development of new sources of revenue, a new role for the university in the information economy, and new approaches to both ownership and academic knowledge.

Corynne McSherry

STUDENT DIVERSITY IN HIGHER EDUCATION

In July 2003, the U.S. Supreme Court determined that diversity is a compelling governmental interest that justifies certain narrow considerations of race. One of the interests highlighted by the Court, which student body diversity appreciably helped to achieve, was the broader educational mission of institutions of higher education. Here, a majority of the court held that diversity contributes to building individual students' knowledge, to advancing existing knowledge, and to preparing students to better serve society as workers, citizens, and leaders. These contributions associated with diversity helped to persuade the Court to hold that it is in the best interest of the government to allow for certain narrow admissions practices that enable institutions of higher education to better fulfill their overarching mission, since our increasingly diverse nation will eventually rely upon students educated in those institutions to fuel the nation's economy and to shape its moral, civic, and public life.

The Supreme Court's understanding of the important role that student diversity plays in fulfilling the educational mission of higher education institutions was based in part on a growing body

of empirical evidence that established how diversity enhanced learning outcomes for students. The importance and usefulness of this body of research and other recent studies is not limited to just making a legal case for race-conscious admissions practices. Rather, this set of findings also offers many relevant and significant implications for institutional practice, particularly if educators are truly committed to realizing the added benefits associated with enrolling a diverse student body. Thus, a main goal of this entry is to synthesize the existing empirical evidence about the benefits of diverse learning environments for students and, based on those findings, to identify some key principles that would help to maximize for students the benefits associated with diversity. Before synthesizing this body of research, it is helpful to explain the concept of "diversity" as it has evolved in U.S. higher education.

THE EVOLUTION OF DIVERSITY ON CAMPUS

The concept of diversity has certainly come a long way. Over the course of three and a half decades, this concept and its related set of interventions have evolved to encompass a broad set of purposes, issues, and initiatives on college campuses (Chang 2002). The earliest initiatives to increase minority access on predominantly white campuses and later to enhance gender equity were prompted by desegregation mandates as well as social justice concerns grounded in democratic principles of equal opportunity and equality. Although the issue of equitable access for underrepresented students of color remains of paramount interest, since the mid-1980s concerns about their persistence and academic success have become another important thrust of diversity efforts in higher education. Additionally, addressing ongoing incidents of racial and ethnic hostility directed toward students of color and the evolution of what Lawrence Levine (1996) termed "a more eclectic, open, culturally diverse, and relevant curriculum" (p. 171) have also become important concerns of a rapidly expanding diversity agenda. These trends did not center only on race and ethnicity, but also encompassed other high stakes categories (i.e., gender, class, sexual orientation, and disabilities).

The oversimplified historical account above makes

clear several crucial points about campus diversity. First, the concept of diversity has evolved in a manner that now encompasses a wide range of issues related to democratizing nearly every aspect of higher education. Second, this concept is closely linked to a set of broad and varied campus activities and initiatives. Third, those activities and initiatives or diversity-related interventions are not limited to improving only the proportional representation of underrepresented racial/ethnic minority students but seek to also address multiple aspects of campus life and climate as well as the needs and interests of other groups of students. Last, given this evolution, the concept of diversity is perhaps more accurately understood as a process with a set of institutional interventions than as a single outcome that targets only student body composition. According to Stephen Macedo (2000), "At its best, talk of diversity . . . reminds us of the extent to which the promise of freedom and equality for all remains a work in progress: only partially realized, only partially understood" (p. 3).

The broad set of institutional interventions linked to diversity suggests that diversity now seems to touch nearly every aspect of academic and civic life. Those efforts are leaving an indelible mark on higher education and are having widespread educational impact. At the same time, the application of diversity is not uniform across college campuses and some places do a much better job of maximizing the benefits associated with diversity than others. A synthesis of a body of empirical research follows to help clarify how applying diversity can add significant value to students' learning and educational experiences.

RESEARCH SYNTHESIS

Because of the recent national attention on the constitutionality of race-conscious admissions practices, much of the empirical research about diversity in the last five to ten years has focused mainly on racial/ethnic diversity with particular interest in enrolling a larger proportion of underrepresented students (African American, Latino/a, and Native American). It is conceivable that this research could be generalized to address other issues, such as diversity with respect to socioeconomic status or sexual orientation, but this has yet to be empirically established. This limitation with the body of research to be dis-

cussed should be kept in mind when considering its practical significance.

Several recent research reviews illustrate well how various aspects of racial and ethnic diversity within higher education help promote benefits of assorted kinds for undergraduate college students (see for example: Milem, Chang, and Antonio 2004; Hurtado, Dey, Gurin, and Gurin 2003; Milem and Hakuta 2000; Hurtado, Milem, Clayton-Pedersen, and Allen 1998, 1999; Smith et al. 1997). Basically, these reviews show that diversity-related benefits are far ranging, spanning from benefits to individual students and the institutions in which they enroll, to private enterprise, the economy, and the broader society. There was remarkable consistency among those reviews concerning both empirical studies considered and conclusions drawn.

One important conclusion that emerged from them is that the vitality, stimulation, and educational potential of an institution are directly related to the composition of its student body, faculty, and staff. Campus communities that are more racially diverse tend to create more richly varied educational experiences that help students learn and prepare them better for participation in a democratic society. One reason for this is that race still shapes opportunities and experiences in U.S. society. Subsequently, students of different racial groups at the point of college often have differing opinions and viewpoints about a wide range of pressing contemporary issues. Although individuals of any given race hold the full range of opinions, as a group, average viewpoints differ from each other on such issues as the death penalty, consumer protection, health care, drug testing, taxation, free speech, criminal rights, and the prevalence of discrimination.

According to one of the reviews noted earlier (Milem, Chang, and Antonio 2004), a set of studies shows that those racial differences in viewpoints at the student level contribute to establishing a student body with a greater dispersion of opinions. Those studies show that the dispersion of opinions in certain domains (i.e., the extent to which a student feels that racial inequity is a prevalent issue that requires remedies such as affirmative action and the degree to which a student endorses more lenient treatment and punishment of criminals in our society) increase as the proportion of underrepresented students in an entering class increases. It appears from these find-

ings that increasing racial diversity leads to a broader collection of thoughts, ideas, and opinions held by the student body, and this in turn increases the probability of exposing a student, irrespective of his or her race and opinion, to a wider range of perspectives regarding a particular issue.

Perhaps the above core characteristic of a diverse campus community is the key mechanism by which diversity makes an intellectual atmosphere, according to Justice Lewis Powell, more “conducive to speculation, experiment and creation—so essential to the quality of higher education” (*Regents of the University of California v. Bakke*). According to Robert Bickel (1998), this belief that exposing students to a wider range of opinions improves the quality of those students’ intellectual advancement can be traced back to John Stuart Mill’s famous argument penned in his 1859 essay *On Liberty* (republished 1963). Mills argued that popular opinions must be submitted to the “marketplace of ideas” and suggested that when perceptions are narrowed by the limits or biases of experience, geography, education, or class and become the basis of judgment and social policy, true social advancement is ostensibly compromised.

The educational benefits associated with exposure to different experiences, viewpoints, and opinions have also been linked to psychological theories. Several of the reviews cited earlier draw from psychological theories and discuss the importance of providing “discontinuity” from students’ past environment. Based on a body of psychological literature, the reviewers conclude that institutions of higher education are more influential when they offer students a social and intellectual atmosphere that is distinctively different from the home and community backgrounds of the students. Such an atmosphere creates greater discontinuity for students and subsequently improves the chances for enhanced cognitive and identity development. For example, when students encounter novel ideas and new social situations, they are pressed to abandon automated scripts and think in more active ways. By contrast, institutions that have a homogeneous community and replicate their students’ home environment or home community’s social life and expectations are more likely to impede their students’ personal and intellectual development because students are not nearly as challenged in those educationally relevant ways.

In short, due to the ongoing power of race to shape life experiences in U.S. society, racial and ethnic compositional diversity create a rich and complex social and learning environment that can be applied as an educational tool to promote students’ learning and development.

Because a student’s understanding of and willingness to engage in diversity is not assured, which influences whether there is actually what Justice Powell called a “robust exchange of ideas,” all four reviews made clear that a sustained and coordinated effort regarding diversity is necessary to increase the positive effects on students’ development and learning. Research on diversity consistently show that benefits for students do not automatically accrue to students who attend institutions that are, in terms of student or faculty composition, racially and ethnically diverse. Rather, if the benefits of diversity in higher education are to be realized, close attention must be paid to the institutional context in which that diversity is enacted. In other words, it is not enough to simply bring together a diverse group of students. Although this is an important first step in creating opportunities for students to learn from diversity, it cannot be the only step that is taken. Diverse learning environments provide unique challenges and opportunities that must be considered if the learning opportunities that they present are to be maximized.

The cited reviews identified several effective ways to maximize such opportunities for cognitive and personal growth, particularly regarding increases in cultural knowledge and understanding, leadership abilities, and commitment to promoting understanding. Besides bringing diverse students together, campuses must provide stimulating courses covering historical, cultural, and social bases of diversity and community, and must create opportunities and expectations for students to interact across racial and other social differences. Such intentional institutional efforts are critical because it is much easier and less risky to gravitate to and stick with what is most familiar. When students retreat from the rich and complex social and learning opportunities offered by a diverse campus and settle in settings within their institutions that are more familiar and that replicate their home environments, they are more likely to miss out on the added benefits associated with diversity.

One important context for engaging in diversity

is the development of interracial friendships. Studies of friendships on a diverse campus indicate that the outcomes associated with diversity are both realized from and mediated by diverse friendships. According to Antonio (2001), students with a more diverse set of best friends tend to interact more across race outside of the comfort zone provided by their best friends. When they do interact with students other than their best friends, they are more likely to engage in conversations on topics concerned with diversity and difference such as political and social views, racism and discrimination, women's rights, and national politics. Antonio argues that interracial friendships serve the critical function of defining norms of behavior for engagement with diversity.

With respect to the benefits of curricular diversity, a few studies noted in the reviews suggest that the general education curricula, specifically a diversity course requirement, can play a meaningful role in diminishing divisive racial prejudices and subsequently improve race relations. Moreover, such curricular efforts also serve other educational purposes. It turns out, according to the Milem, Chang, and Antonio (2004) review, that reduced levels of racial prejudice are associated both with enhancing students' ability to adapt successfully to change, especially related to demographic and cultural shifts, and with developing students' values and ethical standards through thoughtful reflection of arguments and facts. Thus, reducing students' level of racial bias can be viewed as a rigorous educational undertaking, which requires, according to information-processing models of social judgment, students to actively process new information that conflict with existing knowledge. Besides developing more accurate knowledge, students also learn to think more deeply, actively, and critically when they confront their biases and change erroneous information. Having students think in these ways linked to diversity-related issues not only helps to improve race relations but also promotes other educational interests that are already widely shared and valued by the higher education community.

The effectiveness of campus initiatives and programs to successfully engage students in diversity also depends on a larger institutional context. The importance of this larger institutional context often characterized by the mission and goals of an institution, level of commitment at the highest level of lead-

ership, and permanent organizational/budget integration of key programs and initiatives should not be underestimated. According to almost all of the reviews, the perceived level of institutional commitment to diversity (perceptions that the institution is actively recruiting diverse individuals and promoting multicultural appreciation through campus activity) is associated with perceptions of relatively low racial tension among African American, Chicano, and to some extent, white students. Higher perceived levels of commitment have also been shown to be associated with higher reported college grade point averages and increases in personal goals to promote racial understanding. In contrast, lower levels of perceived institutional commitment to diversity accompanied by higher levels of perceived hostility and discrimination is associated with lower grades for African American students, feelings of isolation among Native American students, a higher sense of alienation among all students, and lower scores on college adjustment and sense of belonging among Latino students. Likewise, white students' perception of hostility or discrimination on campus had both direct and indirect effects on white students' persistence in college and was associated with their lower sense of belonging on diverse campuses.

Given the above conclusions extracted from the reviews, it appears that an institution's overall commitment to diversity is a key factor in determining whether or not students are positively affected. It would seem that students are more likely to perceive greater levels of institutional commitment when campuses enact a more comprehensive diversity approach, as opposed to a piecemeal one. The effects of institutional commitment to diversity may not only affect individual outcomes but is likely to also affect the culture/climate of an institution, which thus further reinforces the benefits associated with diversity.

Some evidence of the type of effect noted above was reviewed by Milem, Chang, and Antonio (2004). They noted that one study showed that even those students who have very little cross-racial interaction yet are part of a student body that has high average levels of interaction tend to report greater individual gains in openness to diversity than those who have the same level of interaction but are a part of a student body that has low average levels. Another study they reviewed found that white

students attending an institution with fewer students of color (less than 10 percent of the total) were 72 percent more likely to participate in the Greek system than white students at an institution with more students of color (more than 17 percent).

Even on relatively diverse campuses, students may view institutional commitment to diversity as weak and, consequently, feel discouraged to interact with racially different others. According to Antonio (2001) the appearance of ethnic clustering or self-segregation on campus is often interpreted by students as a failure of diversity and evidence of a token commitment to diversity by an institution. Curiously, this was perceived not only by students who maintained few interracial relationships but also by those who maintained many such relationships. Since such students regardless of their level of cross-racial contact generally appeared to be discouraged by the climate for diversity fostered by their institution, Antonio concluded that institutional commitment needs to be made highly visible and unambiguous if students are to view theirs and others' interactions with diversity as commensurate with the cultural norms of the campus.

Even though a student's actual engagement with diversity is a more direct and powerful way to realize developmental gains, the above findings also suggest that being in an environment committed to diversity may also contribute to students' self-reported development and choices in campus participation. This emerging body of research indicates that the institutional conditions that promote diversity may by themselves improve positive race relations, irrespective of a student's level of interest in and engagement with diversity. The literature also suggests that high levels of cross-racial interaction among students might well be either linked to or a proxy for a unique campus culture/climate and set of institutional practices, which make it possible for all students to improve knowledge of and ability to accept different races/cultures. This set of linkages, while certainly possible, is an area that deserves greater empirical attention.

IMPLICATIONS OF DIVERSITY BEYOND EDUCATION

Hurtado, Dey, Gurin, and Gurin (2003) assert that the higher education literature identifies a number of important issues that link diversity to student learning, including factors related to individual development and the environments within which students are educated. They indicate that three points have emerged from years of research that has explored these issues. First, individuals who have been educated in diverse settings are far more likely to work and live in racially and ethnically diverse environments after they graduate. Second, individuals who studied and discussed issues related to race and ethnicity in their academic courses and interacted with a diverse set of peers in college are better prepared for life in an increasingly complex and diverse society. Finally, increasing the number of diverse students is essential. However, they also claim that it is just as important for campus leaders to take affirmative steps to create the conditions that maximize both the development of learning and democratic outcomes that can result from being educated in racially/ethnically diverse environments.

If campuses are to maximize the educational benefits that diverse learning environments offer, their institutional leaders must learn to think more systematically and multidimensionally about diversity when they consider the types of policies and procedures that can be implemented. The existing research consistently shows that intentional actions that create meaningful contact between individuals and ideas through the formal curriculum and its implementation, as well as through friendships and peer-to-peer interactions in informal settings, help create the necessary conditions that enhance student learning through diversity. When carefully crafted and nurtured, Hurtado et al. (2003) claim that such diversity-related experiences can help transform the ways people learn not only about issues of equity and justice, but how they approach the learning task itself.

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EDUCATION FROM AN INTERNATIONAL PERSPECTIVE

Because there is no universally agreed-upon definition of “education” or of “international perspective,” it is important at the outset for readers to recognize the meanings assigned throughout this chapter to those terms and to related ones.

Education refers to people’s efforts to improve learners’ knowledge, skills, and attitudes. Thus, parents teaching their children good manners and teachers instructing students in how to read fluently qualify as education. However, children’s discovering on their own how to ride a bicycle or how to solve a picture puzzle is learning, but not the kind of learning that results from education—that is, from intentional instruction.

The expression “international perspective,” as intended here, means comparing nations, societies, and cultures from the vantage points of (1) forms of education, (2) patterns of educational development, and (3) stimulants to development.

A nation consists of a physical territory, the people who inhabit that territory, and the official way the relationships among those people are organized. Rules of organization are usually specified in written constitutions, laws, and regulations. Some organizational rules are not written, but instead are understood by the populace as customs. Nations are identified by such titles as China, the Netherlands, Uruguay, Zambia, Canada, Australia, and Fiji.

A society is a group of individuals living together as a community. Societies can be large, encompassing all humans (as in the expression “human society”), or can consist of all inhabitants of a nation (as in Swedish society and Bangladeshi society). Or societies can be rather small, involving no more than a single region, tribe, city, or village.

The word “culture” refers to the customary way of life shared by a group of people, a way of life that typically includes a common language or dialect and a common cluster of occupations, artistic endeavors, religious beliefs, technologies, and recreational pursuits. Cultures can bear such labels as Navajo, Arabic, Samoan, Latino, Hindu, Basque, Scottish, and Romany (Gypsy). The expression “national culture” refers to those aspects of life shared by essentially all inhabitants of a nation, resulting in what is referred to as French culture in France, Japanese culture in Japan, and American culture in the United States. In addition to the cultural features found in the lives of nearly all of a nation’s residents, subgroups within the population exhibit additional beliefs and practices that are held by a limited number of their compatriots. Thus, within U.S. American culture there are such Native American subcultures as Cheyenne, Chumash, Delaware, Kiowa, Lakota, and Ute. Some cultures bridge national borders. As a result, a variety of countries have groups subscribing to beliefs and practices of Catholic culture, European culture, Spanish culture, Islamic culture, and the like.

With the above definitions of key words in mind, we turn now to the purpose of this introduction, which is to describe in some detail the three vantage points from which the chapter analyzes education around the world: (1) forms, (2) development, and (3) stimulants to development. Following this introduction, the remaining sections of the chapter illustrate diverse patterns that those perspectives assume in different nations, societies, and cultures.

R. Murray Thomas

FORMS OF EDUCATION

All educational efforts, past and present, share at least thirteen components in common. The first twelve are (1) settings, (2) aims, (3) entrance requirements, (4) personnel who are the suppliers of education, (5) learners, (6) things to learn, (7) instructional methods, (8) learning materials, (9) evaluation techniques, (10) behavioral expectations, (11) behavioral consequences, and (12) exit requirements. These elements are combined to form the thirteenth component, a system. What distinguishes one nation's or one society's educational system from another is the particular content of the components.

The nature of each component can be defined by one or more questions, as indicated in the following examples, each of which begins with a defining question and then continues with a few illustrative alternatives of the component in order to show diverse forms the component may assume in different nations, societies, or cultures.

EDUCATIONAL SETTINGS

Defining Question

Where are the learners when they receive instruction, and from what source does the instruction originate? Throughout the world the most popular settings are the home and the school. However, other locations are also used.

Illustrative Alternatives

- Home, instructed by parents
- Home, connected to the computer/Internet
- School classroom, instructed by a teacher
- Church or mosque, instructed by a cleric
- Village green or square, instructed by a teacher

EDUCATIONAL AIMS

Defining Question

What kinds of people are educational efforts expected to produce?

Illustrative Alternatives

The dominant purpose of a particular educational endeavor can be that of producing:

- Patriotic Mexicans
- Devout Buddhists
- Efficient workers for the nation's labor force
- Faithful Canadian citizens
- Well-versed scientists
- Liberally educated British citizens
- Well-behaved Vietnamese

ENTRANCE REQUIREMENTS

Defining Question

What characteristics must applicants display in order to be accepted in an educational program?

Illustrative Alternatives

- Membership in the family that provides the instruction
- A specified age
- A specified gender
- A specified ethnic background
- A particular social class or socioeconomic status
- Adequate test scores
- Specified previous experience

EDUCATIONAL PERSONNEL

Defining Questions

What sorts of people furnish education, what are their roles, and what preparations have they had for their job?

For convenience of analysis, personnel can be divided into three types: (1) those who offer instruction directly to learners, (2) those who indirectly offer instruction to learners via media, and (3) those who furnish support services to the people who directly instruct learners.

Illustrative Alternatives

- Direct instructors: parents, siblings, credentialed teachers, classroom aides, counselors, tutors, classmates

- Indirect instructors: textbook authors, creators of instructional television programs, planners of lessons for the computer/Internet

- Support personnel: school principals, counselors, psychologists, social workers, custodians, school-lunch workers, bus drivers

LEARNERS

Defining Question

Who are the recipients of the educational effort, and where do they receive instruction?

Illustrative Alternatives

- A family's children and youths, taught by parents at home
- Girls and boys, ages two to five, in a nursery school
- Girls and boys, ages five through twelve or more, in an elementary school
- Adults, any age, in a class on basic literacy in the national language
- Soldiers, in a basic training course for new recruits
- Individuals above age five, in a class on computer literacy

THINGS TO LEARN

Defining Question

What knowledge, skills, and attitudes are learners supposed to acquire?

A collection of these "things" is often referred to as the curriculum or the course of study, which can be in the form of one or more of the following alternatives.

Illustrative Alternatives

- A set of textbooks
- A curriculum guidebook
- Teachers' instructional manuals
- A teacher's written lesson plans or lecture notes
- Unwritten information that a teacher has in mind
- Accounts of current events from newspapers, magazines, and television broadcasts
- Suggestions from learners about knowledge and skills they would like to acquire

INSTRUCTIONAL METHODS

Defining Question

What procedures do the providers of education use to help learners master the educational goals?

Illustrative Alternatives

- Lectures
- Question/answer sessions
- Demonstrations
- Textbook reading assignments
- Class discussions
- Group projects

LEARNING MATERIALS

Defining Question

What equipment and supplies are used for promoting learners' progress toward the goals?

Illustrative Alternatives

- Chalkboards and bulletin-board displays
- Pens, pencils, crayons, and writing paper
- Textbooks and reference books
- Radios and television receivers
- Personal computers

EVALUATION TECHNIQUES

Defining Question

What devices are used to assess how well learners are mastering the knowledge, skills, and attitudes that they are supposed to gain from their educational experiences?

Illustrative Alternatives

- Written tests
- Oral recitations
- Homework assignments
- Term papers and individual projects
- Teachers' observations of learners' participation in class activities
- A teacher's overall impression of learners' knowledge, skills, and attitudes

BEHAVIORAL EXPECTATIONS

Defining Question

How are learners expected to act?

Illustrative Alternatives

- Consistently attend school or home-learning sessions
- Diligently complete assignments—no cheating
- Show respect for teachers and abide by their rules and guidance
- Respect fellow learners—do not harm or ridicule them

BEHAVIORAL CONSEQUENCES

Defining Question

What rewards and punishments are used to encourage learners to behave in acceptable ways?

Illustrative Reward Alternatives

- Verbal compliments, in private or in front of other people
- Gifts, money
- High marks or grades
- Certificates, medals
- Accelerated progress to advanced learning opportunities
- Privileges, such as more free time or relief from onerous duties
- Public commendation, as in newspaper articles and award ceremonies

Illustrative Punishment Alternatives

- Corporal castigation—spanking, slapping, caning
- Verbal criticism, ridicule—in private or in front of other people
- Low marks, failing grades
- Removal of privileges, such as a shortened lunch hour or no recess period
- Heavier burden of assignments, as in using additional homework as punishment
- Exposure to public scorn, as in a newspaper article or public assembly
- Expulsion from the learning program

EXIT REQUIREMENTS

Defining Question

What are learners expected to do in order to complete their education experience successfully, and what consequences can they expect for completing it?

Illustrative Completion Requirements

- Exhibit mastery of the knowledge, skills, or attitudes that were taught
- Pass final tests
- Compile enough credits
- Stay in the educational program for a particular length of time

Illustrative Consequences of Satisfactory Completion

- Verbal commendation from teachers
- Written recommendation from teachers
- Certificate, license, or diploma
- A chance to pursue further education
- Employment opportunities

THE EDUCATION SYSTEM

Defining Question

In what manner are the components of an education program linked together in order to help the learners efficiently achieve the goals?

Illustrative System Portrayals

- Organization chart showing components and how they relate to each other
- Written descriptions of each component's duties and powers
- People's unwritten understanding of components' duties and powers

SUMMARY OF EDUCATIONAL FORMS

It should be apparent that the few illustrative alternatives under each of the above thirteen components are only a small number of the different forms each

component can assume. It should also be clear that those forms could be combined in seemingly endless ways to produce the many thousands of specific styles of education found in different societies. The later entry in this chapter entitled “Illustrative Forms of Education” portrays a variety of such styles from different parts of the world.

R. Murray Thomas

PATTERNS OF EDUCATIONAL DEVELOPMENT

No education program remains unchanged as time passes. Instead, every program is in a process of transition. Sometimes the pace of change is exceedingly slow, sometimes moderately rapid, and occasionally very sudden. The term “development,” as intended in this chapter, refers to change in a direction considered to be desirable by the person using the term. The opposite of development is retrogression or deterioration, meaning change that is regarded as undesirable.

Observations of learning programs across the centuries suggest that, even though the rate of change can vary markedly from one place to another, change in virtually all societies moves in a similar fashion—toward greater institutionalization, unification, standardization, diversification, specialization, democratization, secularization, and technological complexity. The word “modernization” refers to the process of societies moving in these eight directions.

INSTITUTIONALIZATION

As societies grow more complex, education becomes increasingly formal and institutionalized. For the purpose of understanding a society’s educational development, a useful distinction can be drawn between life-experience education and formal education. In life-experience education, learners receive instruction as a part of regular daily activities. Instruction is woven into the fabric of normal events, with no separation between teaching and living. Opportunities to provide instruction require no preplanning, because they arise naturally in the course

of ordinary existence. Thus, during daily routines, parents and friends instruct children in how to speak their culture’s language, prepare meals, build shelters, act toward other people, worship gods, adopt health practices, avoid accidents and ill fortune, do their share of the work, and far more.

Formal education, in contrast to life-experience education, involves careful preplanning of what to teach to whom, when, where, and how. Formal education is most often provided to groups organized by age levels and by types of subject matter, with the groups instructed in designated places—schools, colleges, universities—by people trained to be teachers. Learners are expected to participate regularly and diligently in the instructional program.

Within nearly every present-day culture, the education of any child, youth, or adult is an admixture of life-experience and formal education. As time passes, education tends to become increasingly formal. Responsibility for decisions about what to learn, when to learn it, how to teach it, and how to evaluate it gradually shifts away from family members to professionals employed by a government, religious body, or secular foundation.

UNIFICATION AND STANDARDIZATION

As the centuries advance, small societies become united to form ever-larger collectivities, with the cultural differences between the constituent societies diminished in favor of a standardized cultural form common to all members of such a confederation.

When separate communities and regions are amalgamated to form a nation, the nation’s leaders typically encourage or require formal-education institutions to adopt a common system of organization, including common aims and curriculum content. This process does not advance unopposed, because there is always tension between (1) the national leaders’ efforts to standardize the culture, and (2) the individual communities’ efforts to retain their local control and culture. For example, the imposition of a single national language as the medium of instruction in schools can be resisted by cultural groups who favor teaching their children in their own community’s native tongue.

DIVERSIFICATION AND SPECIALIZATION

As a nation grows more modern, education becomes increasingly diversified, with a greater variety of separate programs designed to teach different sorts of knowledge and skills to different learners who play specialized roles in the society.

Village societies referred to as “simple” or “underdeveloped” offer only a few types of occupations, modes of housing and dress, foodstuffs, and forms of entertainment. In contrast, urban societies that are referred to as “modern” or “advanced-industrialized” offer a great host of these elements of living. Consequently, the more modern the society, the more diverse the educational programs needed to prepare efficient producers and consumers of the complex array of services.

DEMOCRATIZATION

As societies modernize and communication among the world’s inhabitants increases, formal education opportunities expand from a selected few learners to a growing proportion of a nation’s citizenry.

In the early stages of any society’s development, formal education is furnished for only a small segment of the population known as the elite. Individuals typically qualify for this prized opportunity by virtue of their family’s position of power in the society. Hence, the children of the aristocracy and the wealthy are the ones who are either tutored or are enrolled in school. In addition, individuals of ordinary ancestry but blessed with special talents (unusual beauty, intelligence, creativity, social skills) may also qualify for elite schooling.

The growing complexity that the process of modernization forces on societies requires that increasing quantities of the citizenry be formally educated. Eventually the entire population is schooled, and the amount of schooling required of individuals increases with each greater degree of modernization. One of the most significant features of modernization has been the rapid improvement in communication facilities, so that people in one part of the world become immediately aware of what is happening in other parts. As a result, social pressure is exerted on less-developed societies to emulate the more modern societies by furnishing ever-more formal educa-

tion to their members, as reflected in the motto of the United Nations’ international schooling campaign “Education for All.”

SECULARIZATION

As societies grow increasingly multicultural, their formal education becomes less religious and more secular in focus.

In virtually all societies, the earliest sponsors of formal education have been religious groups that have used schools to promote their belief systems. Governments—of villages, cities, regions, and nations—in the past have typically trusted the society’s dominant religious group (or groups) to determine who should attend school and what should be taught. However, with the rapidly growing efficiency of international transportation that has resulted from the expansion of modern technology, large numbers of inhabitants of one nation have immigrated to other nations. Consequently, societies that were once dominantly single-faith (all Christian, all Muslim, all Hindu, and the like) have become increasingly multi-faith. As a nation’s minor religious denominations have grown in numbers and political strength, their efforts have resulted in the schools’ aims and subject matter becoming more secular and less religious. Acceptable secular studies include such subjects as language arts, mathematics, history, geography, science, and the arts. However, teaching a particular faith’s doctrine (the contents of the denomination’s holy scriptures) as “the truth” has become increasingly unacceptable, particularly in government-sponsored schools.

TECHNOLOGICAL COMPLEXITY

As societies grow more modern, their educational institutions employ ever-increasing varieties of advanced technology.

In pace with a society’s development, the variety of available teaching methods, equipment, and supplies increases. In all societies, the earliest methods have been oral instruction and demonstration. Learners are told what to believe and what to do, and teachers demonstrate how students should act. These two long-established techniques are not abandoned when new methods and materials are introduced. Rather, the old ones continue in use, supplemented by the

new. Throughout the world, oral instruction—particularly in the form of lecturing a large group of learners—continues to be the most popular mode of instruction, even when other methods could result in more efficient learning. The traditional methods remain in vogue apparently because they are familiar to both teachers and students, are easy to control, and are low cost.

As the centuries have progressed, a wider variety of teaching procedures and equipment has appeared at an accelerating pace. Methods found in present-day schools include lecturing, question-answer sessions, class discussions, small-group discussions, student projects, textbook assignments, role-playing, excursions away from school, demonstrations, exhibits, experiments, interviews with visiting experts, and more. Materials and equipment include chalkboards, bulletin boards, charts, posters, still photographs, textbooks, reference books (encyclopedias, atlases, dictionaries), newspapers, magazines, academic journals, radios, television receivers, audio-tape players, video/DVD players, photocopy machines, computers, and others.

The more technologically modern a society, the more types of teaching methods and materials available and the greater the quantity of each type. The most dramatic technological innovations of recent years have been the personal computer and its allied Internet and World Wide Web. The Internet consists of an interconnected array of large computers around the world that hold billions of items of information about all imaginable subjects. That collection is available to anyone who has a personal or institutional computer at hand and a way to connect the computer to a phone line or communication satellite. The number of people taking advantage of the Internet, after its modest beginning in the 1980s, grew at a spectacular pace to include 533 million worldwide in 2001, an estimated 945 million by 2004, and an anticipated 1.46 billion by 2007. The popularity of the Internet has been greatest in the more advanced industrialized nations. Users in the United States totaled 149 million in 2001 and were projected to reach 236 million in 2007. Western Europe had 126 million in 2001 and an expected 290 million by 2007. The most rapid growth was anticipated in Asian and Pacific nations—from 115 million people in 2001 to 612 million by 2007 (Computer Industry Almanac 2002). Large numbers of Internet users have been students in primary,

secondary, and tertiary institutions. To equip students to take advantage of the Internet, rapidly growing numbers of school systems have made computer literacy a required part of the curriculum.

SUMMARY

In the history of every society, education begins entirely as life experience and gradually becomes increasingly formal, institutionalized, unified, standardized, diversified, specialized, democratic, secular, and technologically complex. Today, societies around the world can be found at different stages of development, ranging from complete life-experience education to highly institutionalized formal education. Examples from such societies are offered in the later entry of this chapter titled “Illustrative Patterns of Development.”

R. Murray Thomas

STIMULANTS TO EDUCATIONAL DEVELOPMENT

Stimulants are conditions in a society that encourage education to change in a desired direction. Among numerous conditions that may serve as stimulants, the four inspected in this chapter are colonialism, international comparisons, funding opportunities, and self-perceived needs.

COLONIALISM

The word colonialism refers to intruders from one society gaining political control over another society and seeking to impose the intruders’ culture—including their educational practices—on the conquered population. The most pervasive, worldwide demonstration of this process occurred between the early fifteenth century and the mid-twentieth century as adventurers representing European nations sailed around the globe, capturing ever-larger territories and subjecting the indigenous inhabitants to the colonialists’ rule. The European-type school that was introduced into colonized societies came to be accepted by the local peoples—or at least by an influ-

ential portion of their political leaders—as the “most advanced” or “best” kind. Learners were separated into age groups for purposes of instruction. The age groups formed a hierarchy of grades or classes, with each higher grade offering more complex subject matter than the previous grades. This type—which today is recognized as the world standard—had acquired the following features that were usually unlike the characteristics of the conquered society’s existing forms of education:

- The knowledge and skills to be learned were pre-set for each grade.
- Textbooks and teaching manuals contained the material to be learned.
- Learners were required to attend learning sessions regularly (usually five or six days each week for a set number of weeks).
- Learners’ mastery of the subject matter was assessed by the quality of their written work and their oral responses to teachers’ questions.
- The decision about whether a learner should be advanced to the next higher grade depended on whether the individual had achieved sufficient mastery of the material in the present grade.
- Certificates were awarded to learners who successfully completed a particular series of grades, thereby officially attesting to the learners’ levels of knowledge and skill.
- Teachers were required to be trained and to be certified for their jobs.

Whereas the most massive colonialism efforts were the ones launched by European nations over five centuries, those were certainly not the only instances of educational colonialism. Since ancient times, educational development in conquered territories has typically been affected by practices the intruders introduced.

INTERNATIONAL COMPARISONS

Publicized appraisals of education in different societies can stimulate attempts at educational reform in the societies that show up poorly in the comparisons. This influence of international comparisons on educational development is nothing new. For instance, the typical form that university education in North America assumed in the nineteenth and twentieth centuries was affected by Americans copying the German university

model. However, it was during the latter decades of the twentieth century that the effect of such comparisons grew fastest and most intense as a result of various agencies examining the kind, amount, and quality of education in many dozens of nations. Political leaders in countries that fared badly in the assessments found the results embarrassing, and they moved to effect improvements that would cast their education systems in a better light in future comparisons.

FUNDING OPPORTUNITIES

After World War II, formerly colonized territories in Africa, Asia, and the Pacific Islands gained their political independence and sought to furnish widespread educational opportunities for their populations. To aid with this process, international agencies, philanthropic foundations, and some of the world’s more affluent nations offered money to support selected educational developments in the newly founded nations. In order to receive the proffered funds, the recipient nations were obliged to attempt the kinds of changes that the funding bodies specified. As a result, a host of innovative educational practices were introduced into a variety of societies during the last half of the twentieth century and the early years of the twenty-first.

SELF-PERCEIVED NEEDS

A further stimulus for change is the recognition by educators, political leaders, or the general public that there are flaws in their society’s present educational practices. Consequently, the people in charge of education endeavor to import or create more effective practices.

R. Murray Thomas

ILLUSTRATIVE FORMS OF EDUCATION

As proposed earlier in this chapter, all forms of education share the following components in common: (1) a setting, (2) aims, (3) entrance requirements, (4) personnel who are the suppliers of education, (5)

learners, (6) things to learn, (7) instructional methods, (8) learning materials, (9) evaluation procedures, (10) behavioral expectations, (11) behavioral consequences, and (12) exit requirements. One form of education is distinguished from another by the particular contents of each component and the pattern in which the components are combined to form a system. In this entry, diverse educational forms that result from different permutations of components are illustrated. Each example, rather than depicting education within a specific family or classroom, describes a type of education that can be found in various places. In other words, the examples represent generic forms of education. The sequence of examples advances from the most extreme life-experience type to the most institutionalized type.

EXCLUSIVELY LIFE-EXPERIENCE EDUCATION

The earliest form of education in all societies has been the life-experience type in which children never attend school but are taught exclusively by relatives and acquaintances during normal daily activities. Today that form of instruction is still found throughout the world in communities that have no schools or in families whose children never enroll in school. An estimate of the extent of such education in modern times can be drawn from reports of the incidence of illiteracy in different societies. According to UNESCO (2002), in the following nations during 2002 the proportion of people between ages fifteen and twenty-four that could neither read nor write at a minimal level of skill was 63 percent in Burkina Faso, 55 percent in Iraq, 49 percent in Bangladesh, 29 percent in Egypt, 26 percent in India, 20 percent in Cambodia, 4 percent in Bolivia, 3 percent in Mexico and Vietnam, 2 percent in China, and less than 1 percent in Bulgaria, Cuba, Greece, Poland, and Russia (UNESCO 2002). Therefore, it seems reasonable to conclude that the illiterates in those nations had never attended school or had attended so little that they failed to acquire the school's most basic teachings. In other words, the education of such individuals was acquired entirely through nonschool experiences.

In a typical life-experience setting, the young are taught by a variety of instructors. Mothers, grandparents, and siblings are the child's earliest tutors who

build the young one's foundation of language usage, behavioral expectations, and customs governing interpersonal relations. As the child grows older, relatives and acquaintances provide models of age-appropriate and gender-appropriate conduct. Youths acquire vocational skills while working alongside their parents and neighbors—growing crops, hunting, fishing, building furniture and shelters, fashioning clothing, creating art works, and more. Cultural history is taught by elders telling tales of the past, tracing a family's lineage, and performing traditional songs and dances. The young learn of religion, politics, and community affairs by attending religious ceremonies and public deliberations. And in modern times, television and radio have joined the more traditional means of providing life-experience education.

MINIMAL FORMAL SCHOOLING

One step toward formal education, beyond the life-experience-only form, involves short-term instruction in a limited skill or cluster of knowledge. Such programs are often referred to as “nonformal education” to distinguish them from the long-term, broad-scale instruction offered in a typical school or college. The most popular aim of nonformal efforts is to teach unschooled youths and adults how to read their country's national language. The content of the programs' reading materials often focuses on family planning (birth control or birth spacing), childcare, health, nutrition, or homemaking and cottage-industry skills. Whenever a program is sponsored by a political or religious group, the content is usually designed to promote the group's doctrine and activities.

Instructors in nonformal programs can be of various kinds—trained teachers, students who are still attending a formal school, ordinary members of the community, political party workers, or devotees of a religious denomination. Some instructors are individuals who recently completed the type of nonformal program in which they now teach. Such has been the case of the popular “each-one-teach-one” approach to literacy training that has been adopted in a variety of nations over past decades; each person who is taught to read accepts the obligation to teach another person to read.

Individuals of any age beyond early childhood can be suitable candidates for nonformal programs, and

instruction can be offered in any of a wide range of locations—a school building during the evening hours, a community meeting hall, people's homes, an open village square, a factory after working hours, or a church or mosque.

SECULAR DAY SCHOOLS

By far the most popular form of institutionalized education throughout the world is the secular day school that follows a European and North American model. Learners attend such a school five or six days a week, five to eight hours a day. Their studies usually include reading, writing, mathematics, science, social studies, arts, physical education, and some basic vocational skills. In many countries, the doctrine of a particular religion will be taught during two or three class periods each week, but such schools still deserve the label secular because the curriculum is dominantly nonreligious.

Secular day schools are structured as a sequence of grades, with each grade occupied by learners of approximately the same age. Successfully completing the year's studies at a grade level qualifies students to advance to the next higher grade for the following school year. Learners who fail to complete the present grade's studies satisfactorily are obliged to remain in that grade throughout the following year. During the year, each student's success in every subject-matter field is periodically reported to the student, to his or her parents, and to school authorities in the form of code letters or phrases that distinguish among levels of achievement that extend from outstanding performance to failure.

Most day school systems, designed to serve learners from about age five or six into adulthood, are organized as a succession of three or four major levels that bear such titles as primary, lower-secondary, upper-secondary, and tertiary. The primary (elementary) level usually consists of the first six grades (learners about ages six to eleven), the lower-secondary level (junior high or middle school) involves two or three grades (learners about ages twelve to fourteen), the upper-secondary level (senior high school) has three or four grades (learners about ages fourteen to eighteen), and the tertiary (postsecondary, college, university) requires one to eight or nine additional years' of study (learners ages seventeen to eighteen and beyond). It is apparent, however, that

this general pattern can assume numerous variations in different countries. At a growing pace, the foregoing structure has been extended downward to include learners below age five or six. As a result, kindergartens and nursery schools, which enroll children of ages three to five for half-day or full-day attendance, have proliferated rapidly over the past century.

Learners who complete a school level satisfactorily usually receive a certificate or diploma attesting to their accomplishment.

Because day school students spend only a portion of their waking hours in school, a large amount of their education is acquired outside the school in the form of life experiences. From people in their home and neighborhood, learners acquire much knowledge and many skills. In addition, for centuries books and newspapers have served as influential out-of-school teachers. Then in recent decades, those traditional printed sources have been dramatically supplemented by motion picture and electronic media—films, radio, television, audiotapes, videos, compact discs, and personal computers.

RELIGIOUS SCHOOLS

Thousands of schools around the world, operated by religious organizations, offer instruction focusing exclusively or dominantly on religious doctrine and practices. Some are day schools while others are boarding schools whose students live in dormitories on the school campus. The largest numbers of religious schools are in Asia and Africa. Those in Europe and the Americas—principally at the college or seminary level—are fewer and more often include secular subjects in the curriculum (mathematics, social science, science) than do those in Asia and Africa.

In Islamic regions, religious schools are much alike, focusing chiefly on the faith's holy Koran, other Islamic scriptures, Arabic language, Islamic law, and Islamic customs. Koran schools are known by different titles in different regions—madrasah in Arabic societies, khalwa in the Sudan, pesantren in Indonesia, and pondok in Malaysia. In Hindu India, where the curricula include the study of the ancient Vedas and meditation techniques, such schools are known as ashrams. In Buddhist Thailand they are called wat schools.

Traditionally, most religious schools have not been

organized as a sequence of grades, students have not entered as a group at a particular time of the year, student progress has not been measured by periodic written tests, and diplomas attesting to students' mastery of a body of knowledge have not been awarded at the end of a learning program. However, with the passing of time, more religious schools have adopted certain practices found in European-type secular schools—a grade structure, a defined school year, more secular subject matter, testing, and certificates of completion.

In many parts of the world, pupils not only attend a secular school but also attend one that concentrates on religious studies. Such a pattern of paralleling secular schooling with supplementary religious education appears to have evolved in two principal patterns.

In the first pattern, a traditional religious school system has been largely displaced by a secular public system. The displacement has occurred either because parents have come to judge religious studies as inadequate preparation for youths to progress in a modernizing socioeconomic system or else the government requires that all children follow a curriculum that includes secular subjects not taught in traditional religious schools. Under such conditions, the displaced religious school assumes a supplementary education role, offering its lessons during hours before or after the secular school sessions or on the weekend. An example of this pattern is provided by the present-day *faifeau* (pastor) or catechist schools in the Samoan Islands. The schools were introduced in the mid-nineteenth century by Christian missionaries who established the classes in villages to give the indigenous residents instruction in religious topics and practice in reading the Samoan-language version of the Bible. Eventually such secular topics as geography, history, and arithmetic were added to the curriculum. Faifeau schools served as the islanders' chief educational institution well into the twentieth century. Today, faifeau classes are conducted for only an hour or two in the early morning or evening or during secular school vacation periods. In Malaysia a similar pattern of development finds pupils attending both a secular day school and a supplementary Islamic pondok.

The second pattern of parallel schooling has developed, not from religious schools gradually being replaced by secular education, but rather from parents' desires to have their children receive system-

atic religious instruction in addition to the secular studies of the public school system. An example is the Jewish supplementary school in the United States, a common form of religious education among the nation's six million Jews. The typical supplementary school meets in the late afternoon twice during the week for an hour or two and on Sunday for perhaps three hours. At the elementary level the subjects of study are Jewish history and culture, the Jewish bible, and Hebrew language. At the secondary level such subjects as Jewish law, ethics, and comparative religion are often added.

BASIC EDUCATION VARIANTS

The expression "basic education variants," as used here, refers to kinds of schooling that differ from the form and content of a society's typical secular day school, especially at the primary level. Over the decades, numbers of such innovative departures have been created and disseminated. Characteristics of such deviations from the usual can be illustrated with five examples: the Montessori system, the Freinet movement, Dewantara's *Taman Siswa*, Waldorf schools, and John Dewey's laboratory school.

The Montessori Method

Maria Montessori (1870–1952), the first Italian woman to be granted a medical degree, became concerned about the education of young children when, as a psychiatrist, her attention was drawn to the plight of retarded children who had been sent to asylums for the insane. Her opportunity to create better ways to educate the young came in 1907 when she accepted the directorship of an experimental school for disadvantaged children in a slum section of Rome. At that site and in similar ones she developed her philosophy of childhood education, along with the teaching methods and materials to implement her novel approach.

From careful observations of the young at work and play, Montessori derived four principles on which to base children's learning activities:

1. Children love order and especially enjoy repetition of actions that they have already mastered.
2. Children prefer work to play and prefer didactic materials to toys.

3. Rewards and punishments are unnecessary to motivate learners.
4. A child has a deep sense of personal dignity that is easily offended. (Standing 1962, 40–43)

In the typical Montessori school, the curriculum is divided into four major parts: motor, sensory, language, and academic, with the first three parts providing a foundation for the later academic studies. Within each part, a highly structured set of materials and activities is required for promoting children's learning progress. Precise directions specify how each activity should be carried out. For instance, to foster very young children's motor development, learners are guided through such practical life exercises as buttoning, tying laces, folding cloth, and keeping the environment orderly—sweeping, washing, and tending plants and animals. To promote sensory development, special materials are provided for refining children's accuracy of sight, hearing, touch, smell, and taste—for example, colored tablets ranging from lightest to darkest, chimes ranging from loudest to softest, and block towers extending from shortest to tallest. Language training consists of an adult guiding the child through three steps that center on the specific language concept of interest at the moment:

1. The quality of concern is named. (The adult says, "This is heavy," and points to the heaviest tablet among several tablets.)
2. The child is expected to recognize the quality. (The adult says, "Give me the heavy tablet.")
3. The child pronounces the correct concept in response to the question, "What is this?"

The academic studies that follow the development of motor, sensory, and language training are the traditional skills of reading, writing, and arithmetic. In promoting these skills, teachers are expected to follow a precise sequence of activities dictated by Montessori's system.

Today the Montessori method is practiced in its original form as sponsored by the Association Montessori Internationale (AMI) and in a revised form sponsored by the American Montessori Society (AMS). The revised variation is more common in the United States, while the original version is more popular in Europe, South America, certain Asian countries, Australia, and Oceania.

After nearly a century since its creation, the Montessori basic education variant has proven to be the most durable of the specialized methods of early childhood education invented in past decades. Although Montessori schools are not required to register with any central authority, many of them are listed on selected Internet websites. For example, one website identifies nearly 4,650 schools in the United States and over 1,900 abroad (Intelquest Education Company n.d.). Another website lists fifty-five Montessori schools in New Zealand (Parents Centres New Zealand 2001).

Many of Maria Montessori's innovations—such as activity areas in various parts of the classroom and a wide diversity of learning materials—were radical innovations in the early twentieth century but have since been adopted in regular nursery schools, kindergartens, and primary grades throughout the world.

The Freinet Movement

As a boy, Célestin Freinet (1896–1966) lived in a remote mountain village of Southeastern France until taken into the army during World War I. After the war, embittered and critical of France's social-class system and the nation's rigid schooling practices, he chose to become a primary school teacher dedicated to teaching the poor and dispossessed. At the same time, he saw great hope for the future of humankind in the newly born communism of Russia, a hope that launched his lifelong political identification with the far left.

During the 1920s and 1930s, Freinet refined his pedagogical approach while teaching in a meagerly equipped rural school. In those days, the typical French classroom found the teacher, as the font of wisdom, using lectures to impart the nationally standardized body of knowledge to the learners. Freinet, in contrast, saw the teacher and pupils as cooperative learners, as members of a family who, each day, discussed topics of interest, wrote essays exploring the topics, and used a very simple printing press to publish their writings. There was no memorization of textbook contents or teacher lectures. Pupils served as investigators who engaged in large-group, small-group, and individual learning activities, most of which resulted in some sort of printed product.

Freinet's approach was founded on a series of convictions about the nature of learners and the learn-

ing process that were at odds with the pedagogy of most French primary classrooms. Five such convictions were that: (1) Children are innately curious and display exploratory behavior quite independent of adult intervention. (2) Active exploration in a rich environment, offering a wide array of manipulative materials, facilitates children's learning. (3) Intellectual growth and development take place through a series of concrete experiences followed by abstractions. (4) There is no minimum body of knowledge which is essential for everyone to know. (5) Children will be likely to learn if they are given considerable advice by a teacher in the selection of the materials they wish to work with and in the selection of questions they wish to pursue with respect to those materials.

Such guiding principles and the resulting classroom teaching methods became widely disseminated from the 1930s onward by dint of Freinet's indefatigable writing (letters, books, journal articles) and skillful conduct of workshops and congresses for teachers. Consequently, Freinet's system was adopted as an alternative form of basic schooling by a select number of educators in such nations as Austria, Brazil, France, Germany, Italy, Japan, Poland, and Switzerland, where it is still found today. In each country, the original French version of the approach has been altered to fit into the cultural traditions of the recipient societies.

Dewantara's Taman Siswa

The man identified as the father of modern day Indonesian education was Ki Hajar Dewantara (1889–1959), born into a titled Javanese family and originally given the aristocratic name of Suardi Suryaningrat during the era that the Dutch ruled the Indonesian archipelago as the Netherlands East Indies. The boy's noble origins qualified him to receive a European-type education in a Dutch colonial school. After graduating, he became a journalist who landed in jail for publishing an editorial criticizing the Dutch for celebrating their own independence day while still holding Indonesians in colonial bondage. The colonial government banished Suryaningrat to Holland where he entered a teacher training school that acquainted him with the Froebel kindergarten movement and European educational methods. Upon returning to his homeland several years later, he shed

his aristocratic name in favor of Ki Hajar Dewantara so as to identify himself as a teacher and an active proponent of Indonesian nationalism. In 1922 he founded the first Taman Siswa (Pupil's Garden) school, which developed into an entire system of schools distributed throughout Java and neighboring islands.

The purpose of Taman Siswa was to furnish indigenous Indonesians an education that combined the subject matter of European schools with strong elements of traditional island culture (local languages, arts, personal/social values, history, literature) within a family-like classroom atmosphere. Dewantara introduced the then-novel concept of *tut wuri handayani*, allowing students to develop at their own pace, each according to his or her own nature. The teacher, assuming the role of *pamong* or guide, observed and led from behind. Emphasis was also placed on a key practice in Indonesian village social life called *gotong royong*—cooperative effort for the good of the group.

An important purpose behind Taman Siswa was to give Indonesians access to the same opportunities, professionally and socially, that Dutch citizens enjoyed at that time. This was done by carefully monitoring the quality of education at Taman Siswa schools, a quality that had to be at least equal to that of the best Dutch-colonial schools.

When indigenous Indonesians won independence from Holland's rule during the period 1945–1949, Dewantara became the new nation's first minister of education. Today Taman Siswa schools continue as both a basic education and higher education alternative to public secular schools and religious schools.

Waldorf Schools

In 1919, the owner of the Waldorf-Astoria cigarette factory in Stuttgart, Germany, invited an Austrian philosopher, scientist, and artist named Rudolf Steiner (1861–1925) to give a series of lectures about childhood education to the factory's workers. The owner was so impressed by the lectures that he asked Steiner to start a school for children of the factory employees. Steiner accepted the offer and, after training teachers, opened the Free Waldorf School (*die Freie Waldorfschule*) on September 7, 1919. Steiner's school thrived and led to the establishment of others in Europe. The first Waldorf school in the United States

opened in New York City in 1928. By the early years of the twenty-first century, there were 600 Waldorf schools in thirty-two countries (125 in North America) serving more than 120,000 students enrolled in kindergarten through upper-secondary school.

Steiner reported that by virtue of his special spiritual insight into the nature of children, he recognized that each human was comprised of body, spirit, and soul. He believed children advance through three seven-year stages and their education should be appropriate to the spirit of each stage. He saw birth to age seven as a period for the spirit to adjust to being in the material world. At this stage, children best learn through imitating adult guides and having academic studies held to a minimum. The young were to learn about the alphabet and writing in first grade at around age six, and they were to hear constructive fairy tales but do no reading until second or third grade.

The second stage of growth, from ages seven to fourteen, Steiner saw as a time for the development of imagination and fantasy under the direction of the same teacher throughout the eight years, with the teacher fostering a family atmosphere in which the teacher would be the authoritative parent. Steiner contended that pupils learn best during this stage by accepting and emulating an authority. On the assumption that young children profit little from lectures, all subjects in the early grades were introduced through pictorial media—drawing, music, dance, dramatics. Rather than use textbooks, pupils in the lower grades develop “main lesson” workbooks in which they recorded their experiences and what they have learned. Textbooks would be introduced in the upper-elementary grades to supplement the learners’ main lesson books.

The assessment of a child’s progress at the end of the school years would be in the form of a detailed description in which the teacher writes about the child’s behavior and learning performance. No letter grades or number grades would be assigned.

Today, Waldorf schools strongly disapprove of pupils using television and computers, because of the undesirable content of so many television programs, Internet websites, and computer games and because such media place users in an inactive physical mode. Watching television is also believed by Waldorf teachers to hamper children’s imagination—an intellectual function considered central to the healthy development of the individual.

John Dewey’s Laboratory School

Each of the basic education variants discussed so far produced multiple schools of each variant, schools that continued to operate into the twenty-first century. But such was not the case with our fifth example, the experimental school that John Dewey (1859–1952) and his wife, Alice Chipman Dewey, established in 1896, with twelve pupils and two teachers in a private house in Chicago. That modest innovation would soon become the University of Chicago Laboratory School, which was directed by John Dewey until he moved to Columbia University in New York in 1904. The original laboratory school continues today on the University of Chicago campus as a multi-level institution (nursery/kindergarten, primary, secondary), enrolling around sixteen hundred students. However, it did not spawn a system of Dewey laboratory schools in other places. Instead, the philosophy and practices of the original school would permeate a substantial portion of American education, particularly as expressed in the progressive education movement that played a dominant role in school reform in the United States from the 1920s into the 1940s. Dewey’s philosophy and teaching methods would also be adopted by educational reformers in other nations.

Dewey criticized traditional schools for centering their attention on knowledge collected in the past and “imposing” that knowledge on young children who found it meaningless and detached from the concerns of their own lives. To correct what he saw as a flawed approach to teaching, he proposed six changes in educational principles (see Table 21.1). Guided by these revised principles, teachers would adopt new learning activities (see Table 21.2).

Although Dewey’s proposals did exert notable influence on practices in many schools in the United States—particularly in kindergartens and the primary grades during the 1930s—old teaching methods still continued to dominate the nation’s education system. In the early years of the twenty-first century, traditional textbooks and drill techniques grew especially strong as renewed emphasis was placed on statewide and nationwide achievement testing in reading and mathematics. Schools faced by punitive government sanctions if students’ test scores were below national standards increasingly “taught to the test,” and so heavy emphasis

Table 21.1

Dewey's Six Educational Principles

From	To
Imposition from above by adults	Expression of individuality
External discipline	Free self-motivated activity
Learning from texts and teachers	Learning through direct experience
Acquiring isolated skills by drill	Acquiring skills through pursuing self-chosen goals
Preparing for a remote future	Making the most of present-life opportunities
Static aims and materials	Acquaintance with a changing world

Source: Adapted from John Dewey, *Experience and Education* (New York: Macmillan, 1938): 5–6.

Table 21.2

Learning Activities Associated with Dewey's Six Educational Principles

From	To
Lecturing children	Group discussions to discover and stimulate children's interests
Textbooks	Many hands-on materials for learners to investigate, sites to visit, and people to interview
Written and oral tests	Teachers' observations of children's behavior and work products
Assigning all class members the same tasks	Adjusting learning activities to each child's developmental level

Source: Adapted from John Dewey, *Experience and Education* (New York: Macmillan, 1938): 5–6.

was placed on drill, with little regard for individual differences in ability among students.

DISTANCE EDUCATION

In distance education, teachers are in a different location than the students, often separated by hundreds of miles, so that they correspond with each other via such media as the postal service, radio, television, or the Internet. Distance learning includes many of the features of formal classroom instruction (aims, curriculum content, homework assignments, the awarding of completion certificates) except that in distance learning the source of instruction is not in the same place as the learners and the teaching methods and materials can differ somewhat from those used in classrooms.

Formal distance-learning programs began in both the United States and Europe in the mid-1800s, with students and their instructors corresponding by mail. A teacher at a distant site posted reading materials and assignments to students, who completed the required tasks and mailed the results back to the instructor. Since the middle of the twentieth century, new media (radio, television, audiotapes, videos, the

Internet) have joined postal correspondence to greatly enhance the scope and efficiency of distance learning.

Students choose to enter distance-education programs because they find it impossible or inconvenient to attend a traditional school or university. For example, ill health or the demands of childcare may require that students stay home, or they may live far from a suitable school, or their working hours may prevent them from being in class regularly. To succeed with distance learning, students need to be strongly motivated, diligent, and well organized, because no teacher is present to monitor their activities.

Distance education is most popular at the postsecondary level. A 1980 study of distance-teaching universities in ten countries revealed that most learners were (1) in the age range of twenty to forty years, (2) engaged in part-time study at home, and (3) from less-privileged, urban social groups. The best-known of the tertiary-level distance learning institutions has been the British Open University, which began in 1971, offering instruction via radio, television, books, postal correspondence, audiotapes, videotapes, and, most recently, the Internet. By 1983 there were 95,000 students, a number that rose to more than 200,000 by

the year 2000, when over 24,000 lived outside the United Kingdom. By 2003, more than 220,000 individuals had earned degrees. Nearly all students were enrolled part-time, with 70 percent of undergraduates remaining in fulltime employment throughout their studies. There have been no entrance requirements for undergraduates. Around one-third of students in undergraduate studies have had less than the qualifications required for entering most universities; nearly 70 percent of such students have successfully completed their courses each year. The British model has been widely copied throughout the world.

Over the past decade, distance-education programs have expanded rapidly as a result of the public's widespread use of personal computers and the Internet. The Internet equips instructors to place information on websites (text materials, lecture notes, photographs, charts, speeches, music) that are accessed by learners at any time from any distance. Students can submit written assignments to instructors via electronic mail (email) and, in return, receive their instructor's emailed appraisals of the assignments. In addition, Internet chat groups permit learners to conduct discussions with fellow students who are in distant locations. Universities have increasingly replaced or augmented classroom instruction with so-called cyberclasses that substitute cybernetic or electronic media for in-class teaching. Cyberclasses enjoy a variety of advantages—the number of learners served is not restricted by classroom capacity, learners can attend lessons at times and in places they find convenient, and the funds needed to mount and maintain cyberclasses are only a small fraction of the expense of building and maintaining a school or university campus.

VOCATIONAL EDUCATION

Vocational education involves preparing people for the world of work, that is, preparing them to “make a living” by creating products and providing services for themselves and for members of both nearby and distant societies. The two most distinctive features of vocational education are the kinds of knowledge and skill that are the focus of instruction (the curriculum) and the sites in which instruction often take place.

Some educators distinguish between vocational education and vocational training. They define vocational education as the process of equipping learners with knowledge, skills, and habits applicable in

a variety of occupations. Such knowledge can include understanding scientific principles (physical and behavioral sciences), ways of collecting information about a topic of interest (research techniques), and ways groups can be organized to pursue some goal (social structures). Important skills are those of reading, speaking, writing, and calculating. Habits include getting to work on time, carrying out assignments diligently, and maintaining amicable social relationships with fellow workers. In contrast, vocational training is defined as instruction in the exact knowledge, skills, and habits needed to perform a specific job effectively—operating a lathe in a machine shop, preparing food in a restaurant, caring for plants in a nursery, designing buildings in an architectural office, creating computer programs, selling insurance, and the like. The more general vocational education is typically provided in regular day schools, whereas subsequent vocational training is furnished in special vocational schools and on-the-job apprenticeships.

The sites at which vocational studies are pursued can vary from one program to another. Historically, the earliest form of vocational training involved youngsters learning to become workers by first watching their parents and neighbors do jobs, then gradually taking on the tasks that those jobs required. Much present-day vocational education is still of this in-family variety in dominantly agricultural and cottage industry societies. However, as nations industrialize, in-family training systems become increasingly unsuitable, so vocational studies move to schools and to on-the-job locations.

Formal vocational programs can assume various patterns for providing education and training, as illustrated by three popular types:

1. *Specialized Vocational Schools.* At the secondary school and postsecondary level, schools are established to prepare workers for particular occupations. The curriculum in such institutions is typically a combination of general studies (language arts, physical sciences, social sciences) and the knowledge and skills required for a limited cluster of occupations, such as agriculture, the construction trades, electronics, merchandising, home economics, mechanical trades, business practices, the arts, and more.

2. *Vocational Tracks.* The term “comprehensive school” refers to a secondary school that includes

alternative tracks that students can follow, with the tracks bearing such titles as math/science, social sciences, literature/languages, business, industrial arts, and home economics. Students in each track follow a combination of general studies (reading, writing, speaking, basic mathematics, social studies, physical education) and of studies specific to the occupational focus of their particular track.

3. *School-and-Work Combinations.* In a secondary or postsecondary institution, learners may divide their time between school classes and on-the-job training. They may spend the morning hours in school studying the language arts, science, social studies, mathematics, and the arts. Then in the afternoon they may work on a farm or in a business office, factory, primary school, or other worksite related to their vocational goal. In another version of school-and-work, students spend half of the school year in class and the other half as an apprentice on a job site. This model is often referred to as the dual system.

Nations rarely limit vocational education to only one of these three approaches. However, they may place far greater emphasis on one model than on another. In Germany, the dual system has been the most common model, with apprentices and job trainees spending three or four days a week in the work place and one or two days attending classes in trade schools (*Berufsschulen*). Usually about 40 percent of their schoolwork has been in basic academic subjects, such as languages, mathematics, and sciences, and about 60 percent in subjects directly related to their chosen professions. In 2000, about 1.65 million secondary school students were enrolled in trade schools, or about two-thirds of all youths of secondary school age (Cockrill and Scott 1997).

In Japan, most upper secondary schools have offered academic programs that prepare students for higher education and do not offer vocational courses. Therefore, most Japanese students who have participated in vocational courses have attended vocational schools. During the 1990s, over one-quarter of upper-secondary school students were in vocational education classes.

Specialized vocational secondary schools and dual-system programs have been rare in the United States. Vocational courses have been provided mainly in comprehensive schools, but enrollment in vocational classes declined markedly in the final decades of the

twentieth century. Although nearly all public high school students were taking at least one vocational preparation class by the 1990s, only eight percent specialized in vocational subjects, with most of those students in business or trade and industry fields. Thirty-two percent of public high school attendees were in a college-preparatory track, while the remaining 60 percent had no specialization (National Center for Education Statistics 1992).

In nearly all of the world's modernizing societies, technological innovations over the past eight or ten decades have changed the time during people's lifespans that they engage in vocational studies. In the more distant past, the kinds of occupational skills individuals learned by age twenty or twenty-five would usually be the kinds they would need throughout their working life. Whatever upgrading they might require with the passing years could be obtained through experience on the job. But increasingly rapid technological change and the discrepancies in labor costs from one nation to another (costs that move labor-intensive tasks out of more industrialized societies into less developed ones) have found many people in industrialized countries forced to change their occupations as the nature of the job market changes. Individuals who lose a job because their existing skills have become outmoded are obliged to acquire new knowledge and skills. Thus, vocational preparation has increasingly become a lifelong pursuit, with workers periodically needing to retrain or upgrade in order to fit into the job market.

SPECIAL EDUCATION

The expression "special education" is commonly used to identify programs intended for learners who suffer a degree of disability that requires extraordinary provisions if they are to become adequately educated. The most common types of disability for which special education is designed are disorders of sight, hearing, speaking, physical movement, thought processes, and behavior. In addition, students who display extraordinary talents—that is, gifted learners—are sometimes also included under the term special education, and provisions are created for nurturing their unusual abilities.

The four main ways that schools treat students who have disabilities are: (1) excluding them from formal schooling, (2) assigning them to special schools

or classes, (3) dividing their time between special classes and regular classes, and (4) assigning them to regular classes.

Exclusion

In societies that have high rates of illiteracy because they have been able to enroll only a limited proportion of their children in school, there is little or no provision for educating the handicapped. Learners who suffer marked disabilities are simply excluded from formal education.

Special Schools and Classes

As societies grow increasingly modern and schooling is extended to a greater proportion of the citizenry, schools intended for students with specific types of handicaps are established, initially by private philanthropic and religious groups and later by the government. Thus, there can be a school for the sight impaired (blind and partially sighted), another for the deaf and mute, and a third for the mentally retarded. Or, rather than a special school, there may be, within a regular school, one special class for the handicapped, with the members of the special class rarely if ever expected to mingle with students from regular classes.

Special Plus Regular Classes

In recent decades, and especially in advanced industrialized societies, the number of special schools has diminished as educators have sought to integrate handicapped students into the general schooling population. The rationale behind this effort has been that the hearing impaired, sight impaired, lame, and mentally handicapped are in many respects much like their nonhandicapped age mates and, therefore, the handicapped should learn to live amicably with those age mates, and vice versa. Thus, for those parts of the regular school program in which disabled children can participate satisfactorily, they should be in the same classroom as their nonhandicapped schoolmates. Whenever the disabled need unusual forms of instruction (such as the blind learning Braille and the mentally slow receiving extra help with reading simple material), they can be withdrawn from the regular class and scheduled for instruction in a special class or with a tutor.

Regular Classes

The final version of integrating the handicapped into the school life of the regular population of students is typically called complete immersion or mainstreaming, a practice that consists of placing handicapped pupils fulltime in a regular classroom. The classroom teacher is then expected to make whatever adjustments in the learning program as might be necessary to accommodate the learning needs of the disabled. Advocates of mainstreaming usually support their position with a democratic-right argument, contending that the handicapped have a right to be educated in the same setting as their unimpaired age mates. Opponents of mainstreaming have argued that a principal motive behind the complete integration of the handicapped into the regular classroom has not been philanthropic but, rather, economic—the desire to save funds that would be required for special facilities and special teachers. Regular classroom teachers have objected to full-time immersion because of the time and special skills required to adequately educate the handicapped in a classroom of nondisabled learners.

HOME SCHOOLING

The term *home schooling* typically refers to individuals pursuing a formal course of study at home under the direction of a parent or tutor, or under the learner's own self-direction. The curriculum content of home schooling is most often identical to—or similar to—that of formal schools.

Students or their parents may choose home schooling for various reasons. Learners' health problems may prevent them from attending a regular school, or perhaps their family lives in a remote region with no school nearby. Or the family is either traveling or living temporarily in a foreign country whose language and curriculum differ from those of the learner's home culture. Or else the student or the parents are dissatisfied with the quality of teaching or pace of instruction in the local school, so they believe the student will progress more satisfactorily at home. Parents may disagree with the school's curriculum content, or they may believe that other children who attend the school are ill behaved and potentially a bad influence on their own child. Furthermore, among young adults who are employed,

home schooling offers the opportunity to pursue systematic study that fits one's work schedule.

Nations or states that maintain and enforce compulsory schooling laws typically regulate the conditions under which individuals or groups conduct home schooling. For example, in California, where full-time education is required of all individuals between ages six and eighteen, a parent can qualify as a private tutor by earning a state teaching credential. Any organization that conducts home schooling in California in the form of a private school must file an annual report describing the organization's location, faculty, curriculum, and administrative procedures. The Canadian province of Quebec excuses a student from attending a public school if the school board judges that the learning experience provided at home is equal to that offered in school. In Germany there are no laws that specifically allow for home schooling, although each province gives school officials some discretionary authority to approve alternative education.

The extent of home schooling varies greatly from one nation to another. In the early twenty-first century, nearly one million children were home schooled in the United States, compared with an estimated 400 families in Germany, and 600 to 800 families in Japan. The differences among countries in the proportion of the school-age population being taught at home have been attributed to such factors as parents' disappointment with the public schools' curricula or efficiency, the extent to which governments permit home schooling, types of home schooling programs available, and parents' educational backgrounds.

FULL-TIME RESIDENTIAL SCHOOLS

In the most extreme version of institutionalized education, learners not only attend a school's classes, but they live at the school twenty-four hours a day, seven days a week, leaving the campus only occasionally for short periods of time.

Such residential or boarding schools are not a recent invention but have existed for many centuries in nearly all parts of the world. Thus, full-time residential schools are not the logical final stage of the modernization trends described earlier in this chapter. Instead, such schools typically represent a longstanding tradition of wealthy, upper-class parents placing their children's education entirely in the hands of profes-

sionals, with the hope of furnishing their offspring a prestigious type of schooling in the company of classmates from similar social-class backgrounds. The students are taught the knowledge and skills that well-educated aristocrats are expected to display.

However, not all boarding schools have been intended for children from upper-class homes. Instead, boarding schools have often been designed to impose a colonial society's culture on children of a colonized population. Such was the case in Canada when British and French colonialists, from the sixteenth century into the twentieth century, gradually settled in regions that had been the homelands of American Indians and Inuits. Before the mid-1800s, four Christian denominations (Anglican, Catholic, Presbyterian, and United Church of Canada) had conducted a few residential schools for children from the indigenous tribes. Then the rapid proliferation of such schools began with the issuance of the colonial government's *Gradual Civilization Act of 1857*, authorizing the use of public funds to support boarding schools whose purpose was to "civilize" the native population by teaching English and other features of European culture, including Christian religion. Under government funding, the relatively few residential schools operated by Christian churches increased to fifty-four by 1898, to seventy-four by 1920, and to a high point of eighty-one by 1946. Between 1840 and 1980, an estimated 125,000 Indian children attended a residential school. By the 1960s, the Canadian government and church authorities had become sensitive to the charge that the residential schools had physically and psychologically damaged a great many students and had decimated the ancestral culture of all who attended. As a result, the last of the church-sponsored boarding schools was closed in the 1980s.

R. Murray Thomas

ILLUSTRATIVE PATTERNS OF DEVELOPMENT

In this chapter's introduction, educational development was viewed as progressing toward greater institutionalization, unification, standardization, diversification, specialization, democratization, secu-

larization, and technological complexity. The following cases exemplify patterns that such development has assumed in a variety of societies.

INSTITUTIONALIZATION

Institutionalization is basically the process of the adults in a community assigning schools the responsibility of educating the community's children and youths. The process, in effect, involves shifting at least part of the training of the young from the family and neighborhood to formal institutions operated by people who specialize in teaching. The trend in all societies has been toward continually increasing the aspects of life and the percentage of the population that are institutionalized. The expression "aspects of life" refers to which kinds of skills and knowledge the schools are assigned to teach. For example, are the young not only expected to learn reading and calculating in school, but also to receive instruction in sexual behavior, religious doctrine, recreational activities, etiquette, and more? The expression "percentage of the population" refers to those who, among the community's inhabitants, are to be served by the schools. For instance, is the institutionalization of education limited to the wealthy who are able to pay high school fees? Or is schooling intended for everyone between ages six and sixteen? Or is it for all males between ages two and twenty? Or for anyone, irrespective of age or gender, who wishes to pursue formal study of whatever topics he or she chooses?

International comparisons of schools' curricula (aspects of life) and enrollments (percentage of the population) show that there are marked differences in the degree of institutionalization from one nation to another.

The following examples illustrate progress toward institutionalizing education in various regions of the world over recent decades and suggest what more would be needed if widespread formal education was to become a reality in all countries.

First, consider forty-four Asian and Pacific Island nations. Between 1990 and 2000, the number of children in primary schools in those countries kept ahead of the growth rate of the school-age population as 401 million more children attended primary classes in 2000 compared

to 331 million in 1990. The largest gain was in nursery schools, kindergartens, and day-care centers, which grew by 50 percent to 47 million children (Manzo 2001).

Less encouraging were the primary-school attendance figures in thirty-two other countries, ones at grave risk of failing to provide a basic education for all their school-age children by 2015, when an estimated 156 million children around the world may not have access to schooling unless far greater investment is made in expanding formal education (Manzo 2001).

Gender disparities in school enrollment rates were particularly acute by 2000 in nineteen Arab countries—Algeria, Bahrain, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libyan Arab Jamahiriya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syrian Arab Republic, Tunisia, United Arab Emirates, and Yemen, as well as the Palestinian Autonomous Territories. The region's total population was 270 million, with 39 percent below the age of fourteen. Of the eight million primary-school-age children not in school, five million were girls. Gender parity (equal enrollment rates among boys and girls) had only been achieved in the Palestinian Autonomous Territories, Bahrain, Jordan, Lebanon, and the United Arab Emirates. Djibouti was at the bottom of the ladder for enrollment, with only 30 percent of its primary-age children in school. Djibouti also had the biggest gap between enrollment rates of boys and girls in primary school, with only slightly more than 35 percent of primary age boys in school and just over 26 percent of girls. (Education in the Arab States 2003)

UNIFICATION AND STANDARDIZATION

The term unification refers to individual schools or school districts uniting to form larger integrated school systems. Standardization refers to the administrative and teaching practices in schools becoming increasingly similar as unification takes place. How these phenomena can operate is illustrated in the following paragraphs with the United States as the example. Although the general trend of formal schooling has been toward greater unification and standardization, the trend has not gone unchallenged. In the late twentieth and early twenty-first

centuries, school systems in various parts of the world experimented with decentralization by transferring decisionmaking power from a central authority to individual school districts and schools. The case of New Zealand illustrates a typical decentralization effort.

Unification in the United States

The credit for introducing tax-supported public schooling in North America goes to the Massachusetts Bay Colony where, in 1647, the settlers passed the continent's first compulsory-education law. The legislation required every town of at least fifty families to establish a primary school. Each town of one hundred families was obligated to open a grammar school to provide secondary education. Soon, all of the other New England colonies, except Rhode Island, adopted similar legislation, thereby setting the pattern eventually adopted for public education across the entire country. That pattern involved dividing every colony into school districts, with each district governed by an elected school board of citizens responsible for setting school policy, providing a building and equipment, and hiring teachers. Public schooling was financed chiefly through tax on real estate within the district. The size of a primary-school district was typically determined by how easy it was for pupils to reach school, which usually meant a school within walking distance. Over the following decades, as more immigrants arrived from Europe and moved west, the New England schooling plan moved with them. The same pattern would later be adopted in the southern colonies as well.

When the colonies became self-governing as the result of the American Revolution, the framers of the U.S. Constitution assigned no powers over education to the federal government. Matters of education were left to each state. During the nineteenth and twentieth centuries, local school boards continued to determine the nature of schooling within their districts, but state legislatures, at an increasing pace, gained influence over school districts by passing laws bearing on school administration, curricula, textbooks, teacher certification, compulsory pupil attendance, and more. The most influential method state officials used for imposing their will on the traditionally independent school boards was to furnish money to districts that met the state requirements.

Thus, as the decades advanced, districts became more and more dependent on state funds for operating the schools, and within each state the schooling practices in districts grew increasingly alike as districts adjusted to the state requirements.

A further impetus toward unification during the twentieth century was the improvement in transportation—most notably, the introduction of the school bus. When pupils could ride the bus and no longer had to depend on walking or the family buggy to reach school, several districts could consolidate and thus afford to construct larger buildings, offer a greater variety of services, and enjoy the administrative economy of increased size. As the consolidation of districts advanced, the conduct of schooling grew increasingly standardized, with a single set of rules now governing school practice in what had previously been smaller independent districts. Over a seventy-five-year period, the number of separate school districts in the United States declined from around 130,000 in 1925 to 16,850 in 2000. (Goldin 2003)

As a result of the unification movement in the twentieth century, school districts varied dramatically in size. By 2000, the 16,850 public-school districts throughout the nation included 94,090 schools that enrolled 47.7 million students. The 100 largest districts comprised less than 1 percent of all districts but served 23 percent of the nation's public elementary and secondary students. The 500 largest districts made up 3 percent of all districts but 32 percent of all schools, serving 20.4 million students or 43 percent of the country's total public elementary and secondary enrollment. Seventy-one percent of the nation's districts had fewer than 2,500 students, while each of the 100 largest school districts had at least 45,000 students. The largest district was that of New York City, with 1,075,710 students attending 1,207 schools. The second largest was Los Angeles, with 710,007 students in 655 schools. The enrollment in New York City and Los Angeles together was greater than that of twenty-seven individual states combined (National Center for Education Statistics 1999/2000).

Prior to the mid-twentieth century, the U.S. federal government had played an extremely small role in schooling. But that all changed in 1965 when Congress passed the *Elementary and Secondary Education Act* (ESEA) authorizing federal monies to support educational activities that compensated for

educational deficits in the lives of the nation's poor and minority children. After 1965, the law was revised every five to seven years, obligating the states to carry out an ever-increasing range of educational prescriptions. By 2002, when President George W. Bush signed into law the most recent version as the *No Child Left Behind Act*, the ESEA catalogue of provisions filled three volumes containing over five thousand entries. The provisions now covered a multitude of populations and topics, including: bilingual education, migrant education, Native American education, Native Hawaiian education, Native Alaskan schooling, neglected and delinquent youth, education in corrections facilities, technology, math and science, libraries and media, violence prevention, safe and drug-free schools, women's equity, magnet schools, foreign language in elementary schools, gifted and talented children, arts education, charter schools, education-improvement activities (training, innovation grants, model demonstration grants, higher education), midnight basketball, gun-free schools, tobacco-smoke-free environments, and a host of additional matters ranging from improving materials and textbooks to maintaining and constructing school buildings (Signetwork n.d.).

The most prominent feature of the 2002 ESEA update was a nationwide achievement-testing program in reading and mathematics, with tests in science soon to follow. States were told to set score levels that schools were to reach if they were not to be designated as "failing schools." The government urged states to pass legislation offering cash vouchers to parents who wished to send their children to schools outside the local district, including private schools sponsored by religious organizations. As a result, federal expenditures on education reached a new high in 2003, when twenty-two billion dollars were authorized for implementing that year's updated ESEA programs (Robelen 2002).

Because the federal government had no constitutional authority over education, federal officials adopted two principal strategies for compelling states to abide by ESEA legislation: (1) furnishing large amounts of funds to states that complied with federal education legislation, and (2) publicly embarrassing states and school districts that failed to comply.

In conclusion, by the early years of the twenty-first century, the unification and standardization of schooling in the United States had come a long way from

colonial times, with the process continuing at a rapid pace. However, at the same time, pressure was being exerted by a variety of states and school districts to relegate more decisionmaking to local authorities. The result was a growing dialectical confrontation between centralization and decentralization forces.

Decentralization in New Zealand

Educational decentralization consists of devolving decisionmaking responsibility from a central authority (such as a national government's ministry of education) to local authorities (such as cities, towns, or school districts).

There are various reasons that people propose to decentralize educational functions. Sometimes the primary motive is political, with decentralization representing an attempt by central government officials to pacify regional political powers that threaten the unity of the national state. In this instance, the central government relinquishes a measure of educational decisionmaking to local bodies as a symbol of the central authorities' respect for the rights and competence of regional leaders. In other cases, decentralization is a means of freeing the central government from responsibility, as can occur when the funding of schools is delegated to local governments. In still other instances, the purpose is to enhance the efficiency of the education system by improving the speed and accuracy of communication, of reaching decisions, and of implementing decisions. A fourth motive can be that of adapting education services to the unique needs of different communities. A fifth can be to engage people at the grass roots of society in assuming responsibility for schools in their own community rather than depending on the central government.

The New Zealand government in 1989 launched a massive decentralization program that altered how decisions were reached about most matters affecting the schools. The expressed motives behind the change were to increase administrative efficiency, to improve school attendance rates, to accommodate regional and minority groups' needs, and, in doing so, to improve the quality of student achievement. However, critics charged that the plan was actually an attempt by the government to solve its current legitimation problem (the country's unhappy economic condition) by devolving the most intractable educational responsibilities to the individual schools while still main-

taining central control over policy, basic curriculum requirements, minimal funding, and the monitoring of school performance (Nash 1989).

Before the decentralization plan was adopted, all manner of decisions about the operation of primary schools passed from the central Department of Education Head Office, through a regional office, through a subregional education board, to a school committee, and finally to the individual school. With decentralization, the Department of Education and bureaucracy of suboffices and boards was replaced by a Ministry of Education and, for each school, a board of trustees that included parents among its members.

Responsibilities removed from the Department of Education and assigned to individual schools included those of: (1) defining, in the form of a charter, the relationships between each school and its community as well as specifying learning objectives for each grade level, (2) setting the school's budget, (3) selecting staff members, (4) setting each staff member's pay above a nationally determined minimum level, (5) evaluating the performance of staff members, (6) hiring and firing the principal, teachers, and auxiliary personnel, (7) ordering and maintaining facilities and supplies from whatever sources local authorities deem appropriate, (8) hiring consultants, and (9) ensuring that parents abide by the compulsory-schooling regulations. The New Zealand plan included a parent-choice provision that permitted parents to send their children to any school they preferred rather than being limited to the school closest to the family's residence.

Functions that would remain in the hands of the central authority included those of (1) formulating broadscale national policies to foster educational equity (for females, the indigenous Maori population, Pacific Islanders, and other minorities), (2) defining codes of conduct for individual schools' trustees and principals, (3) setting nationwide curriculum objectives, (4) funding schools on the basis of nationally determined formulae (providing each school a bulk grant plus teachers' pay), and (5) periodically assessing a school's performance by means of a newly created education-review office (Picot 1988; Charter Framework 1990).

In 2000, an appraisal of the New Zealand plan during its first decade of operation led researchers Edward Fiske and Helen Ladd (2000) to conclude that the change led to greater managerial efficiency, parental satisfaction, and student achievement in

many of the high-performance schools but left poorly performing schools—whose students were mainly from socially disadvantaged minorities—in worse condition. Three lessons that Fiske and Ladd drew from their assessment were that:

1. *Reform is always in process.* As soon as a “solution” is implemented, problems occur. Better schools require a constant process of tinkering and reform.
2. *Reform requires trade-offs.* Improving educational equity, strengthening parent choice, fostering school self-governance, and minimizing costs are all great goals, but working toward one goal may undermine the others.
3. *Reform is a complicated task.* What works in one place, under one condition, may not work at all in other places or under different conditions. The problems of schools serving concentrations of disadvantaged students will not be solved by school autonomy and parental choice. If a country cares about the students in such schools, it must be prepared to experiment with large-scale, centralized interventions specifically directed at the educational challenges faced by such schools. (New Zealand's Bold School Reform 2000)

Global Unification and Standardization

Although the main trend in societies has been for education systems to grow increasingly unified and standardized, during the latter decades of the twentieth century and into the twenty-first century a decentralization movement that devolves more decisionmaking to local schools has countered the centralizing tendency. Nations other than New Zealand that have instituted decentralization plans have included Australia, Chile, England, and Nicaragua. However, even when central authorities relinquish some types of decisionmaking, they retain control over such vital matters as major policies, curriculum goals, and the assessment of schools' performance.

DIVERSIFICATION AND SPECIALIZATION

The history in Great Britain of special educational provisions for learners who suffer physical or psy-

chological disabilities illustrates the developmental principles of diversification and specialization. When Sally Tomlinson (1982, 61) traced the officially recognized categories of persons with special educational needs from 1886 to 1981, she found that in 1886 there were only two statutory classes, both focusing on mental retardation—idiot and imbecile. By 1913 six more categories had been added—moral imbecile, mental defective (feeble-minded), blind, deaf, epileptic, and physically defective. In 1945 there were twelve categories, with some incorporating more than one earlier designation (severely subnormal subsumed both idiot and imbecile), while further new varieties extended earlier categories (partially sighted was added to blind, and partially hearing was added to deaf). By 1981 the official types numbered fourteen, with several additional varieties suggested but not formally adopted. The 1981 list consisted of: child with learning difficulties (severe), child with learning difficulties (mild), blind, partially sighted, deaf, partially hearing, epileptic, maladjusted, disruptive, physically handicapped, speech defect, delicate, dyslexic, and autistic. Other suggested types included neuro-pathic child, inconsequential child, psychiatrically crippled child, and aphasic child.

The extent of diversification can vary from one society to another, an apparent indicator of different rates of education's developmental progress. For instance, in Indonesia prior to 1945, when the territory was ruled by the Dutch colonial government, special educational provisions focused on four kinds of handicap—blindness, deafness/muteness, mental retardation, and social maladjustment (juvenile delinquency). After indigenous Indonesians won their political independence at the close of 1949, services for disadvantaged learners expanded at a slow rate until the mid-1970s, when significant attention was focused on the handicapped. In the 1980s the government's definition—according to the Program Perbaikan Kinerja Sistim Pembelajaran (PPKSP)—of exceptional children still stressed the traditional categories of blind, deaf and mute, mentally retarded, and physically disabled. However, the definition had expanded to include the cerebral palsied, the emotionally disturbed, the multihandicapped, the chronically ill, and the gifted (Thomas 1988, 1).

In China by 1980 there was even less diversification of special educational services than in Indone-

sia. Official provisions were limited to four kinds of handicap—blindness, deafness, marked mental retardation, and antisocial deviance (Tomlinson 1982).

DEMOCRATIZATION

The degree of democratization of education—in the sense of extending formal education to ever-larger proportions of a nation's population—is reflected in such indicators as gross enrollment ratios and literacy rates.

Gross Enrollment Ratios

A gross enrollment ratio (GER) expresses the number of pupils at a given level of schooling (such as primary grade four) compared to the number of children in the nation's general population who are the typical age for that grade level (such as age nine). The GER, however, will be misleading if, at a given grade level, there not only are pupils of the typical age for the grade, but also pupils who are younger or older than the typical age because: (1) they began first grade when they were older or younger than the official starting age or (2) at some time they failed to be promoted to the next grade at the end of the year and thus were obliged to repeat the grade. Both of these factors lead to a grade's over-age enrollment, especially in the upper grades. Ideally, the GER for a nation's schools would be 100 percent, with all children in the general population enrolled in the grade typical for their age. But in reality the GER is a combination of children of the expected age for the grade and ones who are younger or older than the expected age. Consequently, if there are many children who are overage for the grade in which they are enrolled, the GER for that country's schools can exceed 100, which usually means that many pupils were failing to advance to the next higher grade each year.

In summary, then, the GER is a rough measure of the proportion of the school-age population enrolled in school, but not a perfect measure.

Consider, for example, the contrasting pairs of 1999 gross enrollment ratios for eight nations from different regions of the world (see Table 21.3).

The figures for such countries as Djibouti and Niger suggest that a relatively small proportion of children between ages six and fourteen were in school. The figures for Tunisia and Malawi imply that not only

Table 21.3

Variation in Gross Enrollment Ratios, 1999

Region	Country	Low GER	Country	High GER
North Africa	Djibouti	37	Tunisia	118
Sub-Saharan Africa	Niger	32	Malawi	158
Latin America	Jamaica	99	Brazil	166
Western Europe	Cyprus	83	Portugal	123

Source: Adapted from *Education for All: Is the World on Track?* (Paris: UNESCO, 2002): 45.

were most school-age children attending school but also many were repeating grades. For instance, 12 percent of Tunisian children repeated first grade and 13 percent repeated second grade. In Malawi, 18 percent repeated first grade and 16 percent repeated second grade (UNESCO 2002, 262, 268).

The high percentage of children in school is an indicator of a society's desired progress toward universal schooling. However, a large number of grade repeaters reflects either (1) inefficient instructional programs that too often fail to teach children effectively or (2) standards of achievement set unreasonably high for the kinds of learners served by the schools.

Literacy Rates

Another indicator of progress toward universal education is a society's literacy rate—the proportion of the populace that can read and write, at least at a simple level of competence. Consider, then, the literacy rates in seven nations and six regions in 1990 and in 2000, suggesting the pace of growth of literacy for people age fifteen and above. (see Tables 21.4 and 21.5)

It is thus apparent that (1) there have been marked differences between countries and regions in the degree to which formal education has been extended to all segments of the population, (2) progress was made during the 1990s toward democratizing formal education, and (3) the rate of progress has varied from one country to another.

In 2003, the United Nations launched a Literacy-Decade campaign (2003–15) with the motto “Literacy for Freedom.” The campaign is aimed at eliminating—or at least significantly reducing—the current figures of 860 million adult illiterates and 100 million children with no access to schooling.

Table 21.4

Adult Literacy Rates in Seven Countries

Nation	% Literate	
	1990	2000
Algeria	53	67
China	78	85
Cuba	95	97
Estonia	99	99
Iraq	35	39
Jordan	82	90
Niger	11	16

Source: Adapted from *Education for All: Is the World on Track?* (Paris: UNESCO, 2002): 206–212.

Table 21.5

Adult Literacy Rates in Six Regions

Region	% Literate	
	1990	2000
Arab States	67	76
Central/Eastern Europe	98	99
Latin America	93	95
North America/Western Europe	99.5	99.7
South and West Asia	62	67
Sub-Saharan Africa	49	60

Source: Adapted from *Education for All: Is the World on Track?* (Paris: UNESCO, 2002): 206–212.

SECULARIZATION

As noted earlier, religious groups originally introduced formal education in most, if not all, societies as a means of propagating their faith. Hence, the primary purpose of teaching reading, writing, history, customs, and the arts was to further a religious mission. However, as societies became increasingly complex, the religious subject matter of schooling was supplemented with subject matter useful in everyday nonreligious life (secular subjects) and founded on evidence other than the divinely revealed holy doctrine in such writings as the Hindu Vedas, Buddhist Tripitaka, Jewish Torah, Christian Bible, and Islamic Koran. The added secular studies, based on empirical observations rather than “authoritative truth,” included mathematics, natural science (as-

tronomy, biology, chemistry, geology, physics), social science, and certain crafts. As societies have modernized, the proportion of secular studies in schools has increased, and religion has become a much-diminished part of the curriculum. Furthermore, the question of whether publicly funded schools should teach religion at all has become a matter of heated debate in recent times.

When the United States of America was established as an independent country in the closing years of the eighteenth century, the issue of the proper relationship between religion and the secular government resulted in a decision to permit all citizens to follow their own choice of a religion or philosophy of life and not endorse any particular religion as the one favored by the government. This policy of separation of church and state has traditionally been applied to schools supported by public monies. Consequently, no religion's doctrine is to be advocated in a U.S. public educational institution. At the same time, privately sponsored schools could propagate whatever faith they choose. One apparent motive behind the founding fathers' separation of church and state was to avoid the conflicts that would arise if they adopted one of the American colonies' religious denominations (Catholic, Quaker, Baptist, Presbyterian, or others) as the government-endorsed religion, thereby alienating members of the other denominations as well as the growing number of agnostics and nonreligious citizens.

The majority of the world's governments, like the United States, have no official religion. However, a minority have continued to maintain a state religion—the Church of England in England, Buddhism in Thailand, Islam in Egypt and Pakistan, Evangelical Lutheranism in Denmark and Norway, Hinduism in Nepal, and Roman Catholicism in Bolivia and Peru. Furthermore, after World War II, the newly formed nation of Malaysia adopted Islam as its official religion. In these countries, as well as in a many that have no official religion, some hours are allocated each week to religious education in all schools.

During the twentieth century and into the twenty-first, people emigrated at a rapidly increasing pace from their home country to settle in some other country. As a result, societies that were at one time single-faith became multifaith, as growing numbers of newcomers arrived who subscribed to different religions or to no religion at all. Such groups' political

activism has encouraged the elimination of religious studies from public schools. Or, as a compromise practice, religious education has increasingly become comparative religion—inspecting various religions rather than teaching one particular religion's doctrine as “the truth.”

The questionable vocational value of classes in religion has also contributed to the diminishing attention schools give to religious studies. For example, in Indonesia's thousands of Islamic *madrasahs* that have been supported by public funds, the government in the 1970s required that students must spend at least 70 percent of their time studying secular subjects and no more than 30 percent on religious topics. This was the opposite ratio to the one traditionally found in *madrasahs* (Thomas 1988).

Whereas the main trend in schools throughout the world has been toward greater secularization of the curriculum, the trend has often met stiff opposition. Consequently, during the early years of the twenty-first century conflicts continued between advocates and critics of including religious doctrine among school subjects. In India, opponents of the nation's ruling Bharatiya Janata Party accused the government of attempting to “saffronize” the country's public education system by fostering Hindu religious beliefs in schools, a violation of the secular status of public schools prescribed in the nation's constitution. Saffron was the color of the flag flown by the Rashtriya Swayamsevak Sangh, a Hindu supremacist organization that administered 14,000 schools.

In the United States, the Oregon state senate voted to prohibit posting the biblical Ten Commandments in public schools whereas the North Carolina state senate voted to permit it. The Hawaii state board of education struck down a proposal that would have permitted the Judeo-Christian biblical version of the world's creation to be taught in science classes—in parallel with Darwin's theory of evolution—as a proper theory of human beginnings. The U.S. Supreme Court, by a vote of five to four, approved of government agencies issuing funding vouchers that families could use to pay for their children to attend private schools, including schools sponsored by religious groups.

In England and Wales, where church-sponsored “faith schools” have been supported by public tax funds, the ruling Labour government recommended a substantial increase in the number of schools on the

belief that they offered a better quality of education than did secular schools. Strong opposition to the plan was voiced by members of Parliament and teachers' unions, charging that faith schools fomented antagonism between religious groups, accepted only students who subscribed to the school's faith, and did not offer a superior level of education. An opinion poll in Scotland reported that respondents, by a four-to-one margin, supported a government proposal to abolish the traditional policy of segregating pupils at age five into schools sponsored by their parents' church affiliation. However, a coalition of Roman Catholic parents vigorously objected to their children's mixing in school with students from other religious backgrounds on the belief that such integration would be morally damaging to the 130,000 pupils attending Scotland's 416 Roman Catholic secondary and primary schools (Thomas 2002, 2003).

In the future, it seems likely that the secularization of public schools' curricula will continue as nations become increasingly multicultural. Furthermore, it appears likely that religious groups will continue to simultaneously hold two contradictory opinions about secularization. Whereas they would like to have their own religious convictions taught (and thus they would support teaching religion in the schools), they fear that other religious groups would insert different doctrine into the curriculum (and thus they would advocate keeping doctrinal views out of public schools).

TECHNOLOGICAL COMPLEXITY

The expression "educational technology" is used here to mean both instructional equipment and the ways equipment and supplies are used to promote learning. Before the twentieth century, the development of new instructional technologies had been quite slow. Prior to Johannes Gutenberg's (1400–1468) invention of movable type, books had to be laboriously copied by hand and were necessarily limited in number. But from the fifteenth century forward, improvements in the printing trade made books—including school textbooks—widely available, so books became the major form of technology on which instruction depended, as is still the case today.

The speed at which educational technology advanced in the world during the twentieth century—and into the twenty-first—can be illustrated with

examples of the use of radio, television, and personal computers in schooling.

Radio

The first commercial radio station in the United States began broadcasting in 1920. By the end of 1921, a total of eight stations were operating. The first educational radio licenses were granted in 1922 to the University of Salt Lake City, the University of Wisconsin, and the University of Minnesota. By 1923 over 10 percent of all broadcast radio stations were owned by educational institutions delivering educational programming. Despite the popularity of instructional radio, only one college-level credit course had been offered by radio by the year 1940. Between 1922 and 1946, educational broadcasting licenses were granted to 202 colleges, universities, and school boards in the United States, while educational broadcasting in Europe and other regions also grew at a steady pace (Nwaerandu, Goodluck, and Thompson 1987).

Between the 1950s and 1980s, radio broadcasting served throughout the world as an important distance-education medium for teaching such topics as: (1) mathematics to school children in Thailand, (2) rural development in India, (3) public health practices in Swaziland, (4) literacy in Mali and Mexico, (5) agricultural methods in Nigeria, (6) health education in Nicaragua, (7) nutrition in the Philippines, (8) farming practices in Canada and Guatemala, (9) family planning in Sri Lanka, Trinidad, and South Korea, (10) civics education in Botswana, and (11) primary-school subjects in the Dominican Republic and Paraguay (Nwaerandu, Goodluck, and Thompson 1987).

By the twenty-first century, the amount of distance education by radio had diminished, principally as the result of competition from television and the Internet. However, radio still played an important teaching role, particularly in developing nations that lagged behind the more advanced industrial countries in the educational use of television and computers.

Television

Credit for inventing the first television camera (iconoscope in 1923) and television receiver (kinescope in 1924) belongs to Vladimir Zworykin, a Russian who immigrated to the United States in 1919. Thereafter, as experimenters effected gradual improvements in

television technology, educators began to recognize the instructional potential of the medium. In 1934, the State University of Iowa—one of the first colleges to offer radio courses for credit—became the first educational institution to broadcast courses over television. However, until the mid-1940s, the public use of television was very limited. Only after World War II did a rapidly increasing number of public-service and educational organizations establish broadcasting stations in nations across the globe.

As the number of educational stations and the variety of educational programs grew, so did the quantity of television viewers. For example, over a twenty-seven-year period at the end of the twentieth century, the number of television receiving sets in the world increased from eighty-one per 1,000 inhabitants in 1970 to 240 per 1,000 inhabitants in 1997. However, the availability of receivers varied significantly from one nation to another. By 1999, the number of receivers for each 1,000 inhabitants was 290 in Argentina, 9 in Cambodia, 703 in Canada, 1.4 in Chad, 294 in China, 555 in Estonia, 580 in Germany, 4.7 in Haiti, 719 in Japan, 600 in the Netherlands, 1.7 in Rwanda, 66 in Syria, 652 in the United Kingdom, and 844 in the United States (Communications 2002, 850–55).

The nature of educational television in different regions of the world can be illustrated with examples from India, Tanzania, Mexico, and the United States.

India Some educational applications of television have been aimed at large audiences. For instance, among the most important educational offerings of the government-operated Television India (*Doordarshan*) have been programs designed for primary school children in the five-to-eleven-year age group. The programs, telecast via satellite in the children's instructional languages, have been viewed on community television sets. Each broadcast segment of forty-five minutes duration has consisted of two programs of twenty minutes each, separated by a five-minute changeover time. The first program caters to the lower age group—five-to-eight-year-old children (grades one, two, and three) and the second to the nine-to-eleven-year age group (grades four and five). Program topics are selected from the primary school syllabus, with preference given to topics difficult to teach in a classroom situation, and are suitable for the visual medium (Chaudhary 1992).

Tanzania Many educational applications of television have been small scale, often limited to a single community, as illustrated by the learning center at Rubya School in western Tanzania, serving as a hub of education and information for both the school and the surrounding area. For instance, the nearby Humra Secondary School and the Nursing and Midwifery Training College at Rubya Hospital have used Rubya's library of videotapes from abroad to complement their curricula. As a result, broadcasts of videos on the topics of genetics, bacteria, viruses, and other health-related matters have distributed information about health issues, such as AIDS, to a wide audience of community members and healthcare workers, in addition to reaching students in classrooms (Nurses and Midwives 2000).

Mexico By 2004, Mexico had accumulated thirty-six years of experience in educational television. One of the most successful endeavors was the Telesecundaria project, designed to provide secondary-level education for students at 14,000 rural schools. In the early years of the twenty-first century, Telesecundaria programs were reaching one-third of Mexico's five million secondary-school students. The project was especially important in rural areas, where the number of students finishing primary school made it infeasible to build separate high school facilities. With a television set, a VCR (video cassette recorder), and audio-visual material, high school students in groups of less than twenty-five followed the telecast courses under the guidance of a teacher.

In 1995 the original Telesecundaria pattern was extended to primary schools and vocational education as well. The nationwide system consisted of 33,500 reception centers equipped with decoders and television sets. Four of the system's nine channels of educational programming were operated by the Mexican government and five by the Latin American Institute of Educational Communication (Cevallos 2000).

United States As one of many public-service television program providers in the United States, Kentucky Educational Television (KET) began in 1968 as a statewide public broadcasting network. By 2003, KET was the largest Public Broadcasting System (PBS) member network in the country, with thirty-two transmitters (sixteen analog, sixteen digital) delivering the PBS national schedule and local arts, cultural,

documentary, and public-affairs productions to viewers throughout the state of Kentucky and in parts of seven surrounding states. By means of a satellite network and digital broadcast, KET also sent hundreds of hours of instructional programs and professional-development seminars to the state's schools each year. In addition, via satellite and the World Wide Web, KET Distance Learning offered fully accredited high school classes in foreign languages, the humanities, and physics (KET 2003).

Personal Computers and the Internet

Whereas large mainframe computers were operating in businesses and government departments by the close of the 1970s, not until the 1980s did individual people have access to computers. Thus, only in the final two decades of the twentieth century did personal computers rapidly become normal equipment for classrooms and school computer laboratories. By the early years of the twenty-first century, computers had spread rapidly to school systems around the world. However, students' access to a computer varied dramatically from one country to another, as examples from the following four nations demonstrate.

United States Between 1990 and 2003, the United States invested \$40 billion to bring computers, educational software, and Internet connections to the nation's schools. The proportion of schools connected to the Internet increased from 35 percent in 1994 to 99 percent in 2001. Between 1998 and 2001, the ratio of twelve students to one Internet-connected computer improved to five-to-one by 2001. Learners who had no computer at home could find one in school or in a public library, so that by 2002 nearly 90 percent of all school-aged children (aged five to seventeen) operated computers and 59 percent used the Internet, making American children the most Internet-connected in the world. Slightly more than 80 percent of children (aged ten to seventeen) in the lowest income category were using computers at school, a figure little different from the 89 percent of children from households in the highest income bracket (Dickard 2003).

Uzbekistan In 2002 about half of the 10,000 schools in the former Soviet Union province of Uzbekistan

were equipped with computers. However, only 1.2 percent of the machines were modern. Most of the others were Soviet-made instruments as much as twenty years old. Due to the age of the existing machines and a lack of spare parts, many were not in working order, so hardly 3 percent of all students in Uzbekistan had access to serviceable school computers. To help remedy this condition, the United States Agency for International Development sponsored the installation of ten personal computers in each of one hundred primary and secondary schools throughout the country, so that at least 10,000 students would have access to a computer and, in many schools, access to the Internet (IREX 2002).

Rwanda As has been the case in many of Africa's Sub-Saharan nations, providing widespread schooling opportunities for Rwanda's population has been a slow, arduous process. Consequently, Sub-Saharan Africa has been late in adopting advanced educational technology. In 2003, the effort to equip Rwanda's schools with computers was fostered by a program called Schoolnet, financially supported by the World Bank and United States Agency for International Development. To launch the effort, Schoolnet personnel installed a computer laboratory (sixteen computers and printers) in each of thirteen secondary schools—one school in each province and two in the city of Byumba. Eleven additional schools across the country were scheduled to receive laboratories by 2004, and a plan was laid to provide one computer in every primary school in the country that had access to electricity (United Nations Office for the Coordination of Student Affairs, 2003).

Sweden By 1999, there was a computer for every ten pupils in Swedish compulsory schools. Eighty-six percent of primary schools had access to Internet computers, while the figure for the upper secondary schools was 95 percent. From 1999 to 2001, the number of computers in the schools continued to increase sharply. The number of computers for teachers' use rose to 84 percent in municipal primary-secondary schools, and the number of teachers per computer became three rather than six as it had been in 1999. In primary-secondary schools, eight pupils had common access to a computer, as compared to ten pupils in 1999. In upper-secondary schools, computer density was reduced from five to four students per computer. Sev-

enty-eight percent of primary-secondary school computers were connected to the Internet, compared to 57 percent in 1999. In upper-secondary schools, 93 percent of students' computers had Internet access compared to 87 percent in 1999. By 2001, two-thirds of the pupils in primary-secondary schools, 81 percent of upper-secondary school students, and 92 percent of upper-secondary teachers had an available email address.

To summarize, over a period of hardly more than two decades, computers in schools became major instructional aids, facilitating students' writing activities, their pursuit of individualized lessons, and their access to infinite sources of information on the Internet. Computers were bound to effect major changes in education in the foreseeable future, providing the populations of developing nations the chance to take advantage of educational resources never before available.

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STIMULANTS TO DEVELOPMENT

Colonialism, international comparisons, funding opportunities, and self-perceived needs were identified earlier in this chapter as four of the factors that can promote educational development. How the four may function in different societies is demonstrated in the following five cases.

COLONIALISM IN THE PACIFIC ISLANDS

From the sixteenth century until the mid-twentieth century, European adventurers sailed the seas, intent on exploring and colonizing the rest of the world. Their goals were threefold—to gain political control over foreign lands, to exploit the commercial potential of the captured territories, and to “civilize” the indigenous peoples. The term “civilize” meant imposing European culture, including the Christian religion, on the conquered populations. The adventurers acted as the official or unofficial agents of European governments, mainly of Belgium, Britain, France, Germany, Italy, the Netherlands, Portugal, and Spain. At the end of the nineteenth century the United States joined the lists by wresting Cuba

and the Philippines from Spain during the 1898 Spanish American War. Japan soon followed by annexing Korea in 1905.

In the European and United States colonizing efforts, the adventurers were accompanied by missionaries who felt duty bound to bring the native peoples of the world into the Christian fold. Church attendance and schooling became the instruments for achieving that goal. The style of schooling was European—a heavy emphasis on Christian doctrine that called for the ability to read the Bible, supplemented by the practical skills of writing, calculating, and simple vocational pursuits (crafts, homemaking, gardening). The curriculum also included geography, natural science, and history (world, European, American). Consequently, it was mainly Christian missionaries who introduced European-style schooling in Africa, Asia, North America, South America, and the Pacific Islands—the schooling style that continues today as the dominant mode of formal education across the world.

The pattern of missionary efforts varied from one region to another as influenced by the nature of the different indigenous peoples' social structures and cultures. How such factors affected the missionaries' educational activities can be illustrated with colonization in the Pacific Islands during the nineteenth and early twentieth centuries.

When European explorers sailed to the Pacific, they were not universally welcomed by the islanders. Ferdinand Magellan, under the flag of Spain, attempted to be the first sea captain to circumnavigate the world, but was slain by natives in the Philippines in 1521. British Captain James Cook, the most renowned of the Europeans who went to the Pacific, was killed by Hawaiians in 1779. However, in most cases the strangers from Europe and North America were accepted by Oceania's Polynesian, Melanesian, and Micronesian peoples. The main intrusions of settlers from Europe and the United States occurred during the nineteenth century, with the most prominent influence on native cultures exerted by Christian proselytizers from Britain, France, Germany, Spain, and the United States.

Prior to the missionaries' arrival, the islanders had no written form of their languages. Thus, it became one of the newcomers' principal tasks to learn the Pacific languages and cast them into written form so the indigenous peoples could read the bible and religious tracts on their own. Churches were built and schools organized in the same style as in the recent arrivals'

homelands. Within two decades or so of the missionaries' appearance, virtually all islanders were confessed Christians and, in the main, Pacific Islanders continued to be Christians into the twenty-first century.

By the early 1900s, virtually all of the Pacific Islands were under the political control of foreign nations, whose colonial governments began to establish secular public schools that operated in parallel to the missionary schools. The new schools were copies of the publicly supported schools in the colonialists' homelands. Following World War I, the League of Nations stripped Germany of that nation's extensive Pacific territories and assigned those islands as mandates to Japan, Australia, and New Zealand. Consequently, the schools in the territories formerly controlled by Germany would assume the character of Japanese, Australian, or New Zealand schools. After World War II, the United Nations assigned the former Japanese-controlled islands of Micronesia in the North Pacific to the United States as a trust territory. Thereafter, the schools in Micronesia were patterned after those in the United States, with the English language replacing Japanese or an island dialect as the main language of instruction.

In summary, each time a foreign government has gained political control of a territory, the schools in that territory have usually become patterned after the schools in the foreign invader's homeland, with missionaries often in the vanguard of educational change.

JOMTIEN, DAKAR, AND INTERNATIONAL TESTING PROGRAMS

The effect on educational development of publicly comparing one nation with another can be demonstrated with two sets of events that occurred during the final decades of the twentieth century and continued into the twenty-first century. The first set concerned international comparisons in educational opportunity. The second set concerned the quality of students' learning as revealed by paper-and-pencil tests and inventories in such curriculum areas as reading, mathematics, science, social science, foreign languages, and citizenship.

Educational Opportunity

In March 1990, delegates from 155 countries, as well as representatives from 150 organizations agreed at

the World Conference on Education for All in Jomtien, Thailand, to universalize primary education throughout the world and massively reduce illiteracy by 2000. The delegates hoped to solve the following problems over the coming decade:

- More than 100 million children, including at least 60 million girls, had no access to primary schooling.
- More than 960 million adults, of whom two-thirds are women, were illiterate.
- More than one-third of the world's adults had no access to the printed knowledge, new skills, and technologies that could improve the quality of their lives and help them shape, and adapt to, social and cultural change.
- More than 100 million children and countless adults failed to complete basic education programs, whereas millions more satisfied the attendance requirements but did not acquire essential knowledge and skills. (UNESCO 1990)

Data showing where different nations stood in relation to primary education opportunities and illiteracy were widely broadcast, with the publicity intended to stimulate each country's political leaders to adopt steps toward improving their country's position in the international comparisons. An assessment of how well the goals had been reached at the close of the decade was offered at the World Education Forum in Dakar, Senegal, during April 2000, attended by more than 1,100 participants from 164 countries, 150 nongovernmental organizations, and numerous agencies and development banks. The assessment revealed that progress had been made, but there was yet much to be done to meet the Jomtien target.

For example, the number of children in school worldwide had risen from an estimated 699 million in 1990 to 781 million in 1998, an increase of around ten million each year. The goal of universal primary schooling had already been reached in Europe and North America, while Eastern Asia, the Caribbean, and the Pacific Islands were close to achieving that goal. The number of school-age children not in primary schools decreased from an estimated 127 million in 1990 to 113 million in 1998. In Latin America and the Caribbean, the total not enrolled in school was more than halved, from 11.4 million in 1990 to

4.8 million in 1998. However, for a variety of reasons, including high population growth, many countries in Sub-Saharan Africa had failed to reduce the number of out-of-school children. Regions achieving the least improvement were rural and poverty-ridden urban areas (Peppler-Barry 2000, 11–13).

The delegates at Dakar then issued the following set of six worldwide goals to reach by 2015:

- Expand early childhood care and education. Provide free and compulsory education of good quality.
- Promote the acquisition of life skills by adolescents and youth.
- Increase adult literacy rates by 50 percent.
- Eliminate gender disparities in education and achieve gender equality.
- Enhance educational quality.

To summarize, from 1990 onwards, widely advertised comparisons of nations' progress toward universal literacy and schooling have stimulated governments to exert serious efforts toward improving their citizens' educational opportunities.

Test Results

The latter decades of the twentieth century witnessed a growing number of international assessments of educational achievement that compared nations in terms of scores on tests administered to a representative sample of students in each participating country. The most extensive assessments were ones conducted by the International Association for the Evaluation of Educational Achievement (IEA), an organization constituted in 1967 to carry out multinational research in education. In selecting what to measure, IEA officials chose to undertake studies that had a good chance of contributing to the improvement of education in a variety of countries, whose methodology was already well developed, and in which many countries wished to participate.

The typical nature of the results of multinational testing can be illustrated with a 1990–91 IEA study of reading literacy among nine-year-olds and fourteen-year-olds in twenty-six countries. The tests, cast in the language medium of the schools of each participating nation, focused on skills of narrative, expository, and documentary reading. The six highest-scoring nations for

nine-year-olds were, in descending order, Finland (mean score of 569), the United States (547), Sweden (539), France (531), Italy (529), and New Zealand (528). The six with the lowest scores were Portugal (478), Denmark (475), Trinidad/Tobago (451), Indonesia (394), and Venezuela (393) (Elley 1992, 14).

Among the multinational assessments that have attracted the greatest public attention are those in mathematics and science, two school subjects viewed by politicians as particularly important for their nation's economic progress and international standing. In a 1999 study of eighth-graders' performance on mathematics and science tests in thirty-eight nations, the six highest-scoring countries in mathematics were Singapore (604), South Korea (587), Taiwan (585), Hong Kong (582), Japan (579), and Belgium-Flemish (558). The six lowest were Iran (442), Indonesia (403), Chile (392), Philippines (345), Morocco (337), and South Africa (275). The six highest in science were Taiwan (569), Singapore (568), Hungary (552), Japan (550), South Korea (549), and the Netherlands (545). The six lowest in science were Turkey (433), Tunisia (430), Chile (420), Philippines (345), Morocco (323), and South Africa (243). Among the thirty-eight nations, students in the United States ranked nineteenth in mathematics and eighteenth in science (TIMSS Results 2000).

The widespread publication of international studies' test results generated pride among the citizens and political leaders of nation's that scored high, whereas the results caused distress in nations that scored lower than vocal citizens and leaders had hoped. For example, in the United States the former Secretary of Education, Richard Riley, declared that the 1999 math and science scores were entirely unacceptable and confirmed the need to raise standards of achievement, testing, and teaching, especially in middle and high schools. One important motivating factor behind U.S. President George W. Bush's expensive "No Child Left Behind" education initiative in 2002 was the "poor showing" of his nation's students on the math and science tests. In a similar mood, Germany's Chancellor Gerhard Schroder, speaking to the Bundestag (parliament) in 2002, declared that the nation's "soft" education policy of recent years was an "embarrassment" and should be replaced (Deutsche Welle World 2002). One apparent cause for Schroder's alarm was German fifteen-year-olds' weak performance on recent international tests in which Germany ranked

twenty-fifth out of thirty-two countries in reading, mathematics, and scientific literacy.

In summary, the recent multinational achievement test movement stimulated political and business agents to support changes in their nation's education system that they hoped would produce more acceptable test scores in the future.

NIGERIA'S ISLAMIC AND CHRISTIAN MISSIONS

Africa's most populous nation, Nigeria, illustrates how a country's present-day education system can result from past colonizing activities by two competing religious movements—Islam and Christianity. In terms of religious affiliation, Nigeria's population of 126 million at the outset of twenty-first century was 43 percent Islamic, 36 percent Christian, and 21 percent African indigenous practices.

The Islamic movement in Nigeria came first. After the Prophet Mohammad's death in 632 C.E., the Islamic religion that he had founded would spread from its Arabian birthplace to regions that today include all of North Africa, Sub-Saharan West Africa, the Middle East, Central Asia, India, Western China, Malaysia, and Indonesia. During certain historical periods, Islam also dominated portions of Southern and Eastern Europe. The religion was carried into new territories by Arab traders and scholars, including those who won the allegiance of indigenous tribes in northern Nigeria from the thirteenth century onward. To propagate the faith, individual Islamic scholars established schools in which children and youths would learn to recite the religion's chief holy book, the Koran (Qur'an), and would study the Sunnah—a collection of the sayings and works of the Prophet Mohammad. By 1919 there were an estimated 25,000 Koran schools in northern Nigeria, many of which would continue into the twenty-first century.

The Christian movement came later. From the fifteenth century into the mid-1800s, European adventurers—including the English—bought slaves in West Africa and shipped them to the Americas. After Britain outlawed slavery in 1807, the British navy not only stopped transporting slaves from Nigeria but also prevented other countries from doing so. In 1886, the British annexed Nigeria as a colony, and Christian missionaries introduced European-type schools designed to bring Nigerians into the Christian fold. Over the following decades, the colony's

greatest economic and educational progress was achieved in the southern sector of the country in which the British—and the Christian schools—wielded the greatest influence. The missionaries' European-type schools, conducted in the English language, failed to make significant inroads in the Islamic northern section of the country. Consequently, when Nigeria won political independence in 1966, the new nation was divided—north versus south—in religion, schooling, and economic strength.

Significant differences between the two colonizing efforts—Islamic and British—led to the two major forms of schooling found in Nigeria today: the Koran school and the European-style school. Moslems did not colonize Nigeria in the sense of a foreign government gaining political control over a region. Instead, their colonizing consisted of convincing native peoples to adopt a new belief system, that of Islam. In contrast, the British won administrative control of the country by force of arms and diplomacy, thereby setting the stage for missionaries to establish schools that would disseminate the colonial masters' religious convictions, schooling subjects, and English language among the indigenous peoples.

In the independent Nigerian government that was established in 1966, the British version of education prevailed. The government-endorsed school system was modeled on a secular European 6–3–3–4 pattern (six-year primary school, three-year junior secondary, three-year senior secondary, and four-year university) and followed the same curriculum found in typical European schools. The language of instruction, especially in the upper grades, was English, which was the medium of communication in a nation whose peoples spoke more than four hundred languages.

During the early years of the twenty-first century, formal education in Nigeria was confronted with an array of serious challenges, those of (1) reducing a high rate of illiteracy, (2) easing the growing antagonism between the Islamic north and the Christian and secular south, (3) increasing the proportion of children and youths attending schools that taught knowledge and skills useful for the nation's socioeconomic modernization, and (4) providing equal educational opportunities for both boys and girls.

Among Nigerians age fifteen and above, 72 percent of men and 56 percent of women were literate in 2000. The rate for men had thus improved by 13 percent for men and by 18 percent for women since

1990. However, there was a marked discrepancy in levels of literacy and European-style schooling between the north and south. A significantly lower proportion of residents in the Islamic north could read and write than in the south, especially among women. During the early years of the twenty-first century, the likelihood that the discrepancy would grow even wider resulted from an increasing number of the northern states adopting Islamic *sharia* (customary) law in contrast to the civil law stipulated in the nation's constitution. Under sharia law, men enjoyed far greater privileges than women, so girls were more often kept home rather than sent to school. They were particularly excluded from secondary and tertiary education. Therefore, the differences in religion and attitudes toward schooling (especially toward the study of secular subjects) that had originated with the missionary efforts of earlier centuries continued to threaten the nation's unity and contribute to conflicts over what sort of education and how much was appropriate for the citizenry.

In conclusion, the case of Nigeria is not merely a tale of educational development in a single country. Rather, the case illustrates conditions affecting educational progress in numbers of developing nations, particularly those of Sub-Saharan Africa.

EDUCATIONAL EFFECTS OF AID AGENCIES

Developing nations frequently receive educational development help from more affluent governments, international agencies, and nongovernmental organizations (NGOs). There are hundreds of such sources of educational aid. The help is usually in the form of monetary loans or gifts, equipment, supplies, advisors, or opportunities for a country's educators to study abroad. The goals and conduct of a typical aid organization can be illustrated with the operation of one of the most far-reaching and influential of the international bodies, the World Bank.

The World Bank was created in 1944 as the International Bank for Reconstruction and Development to help Western Europe rebuild after World War II. By the 1960s the bank had begun providing educational assistance to developing nations. By the end of the twentieth century, bank funds had supported 600 projects in 115 countries at a total cost of \$26 billion. At the

outset of the twenty-first century, the bank's educational portfolio included \$14 billion spread across 187 projects in eighty-seven countries, with new lending between \$1 and \$3 billion a year.

In 1999 the bank published its *Education Sector Strategy*, describing the agency's long-term goal of ensuring that everyone in the world completed a basic education consisting of foundation skills (literacy, numeracy, reasoning, and social skills such as teamwork) and had lifelong opportunities to learn advanced skills in a range of post-basic education settings. The focus of support for the years ahead would be on helping nations which lagged behind the rest of the world in twelve main areas: literacy, basic (primary) education, early childhood education, health practices, schooling opportunities for girls and the poor, school facilities, curricula relevant for improving a country's socioeconomic condition and the quality of life, efficient educational administration, effective teaching, the reduction of school dropouts and grade repeaters, methods of educational assessment, and collecting and reporting schooling data (Education Sector Strategy 1999).

One example of projects accorded high priority in World Bank plans in the early twenty-first century was the effort to improve the school attendance and achievement of girls in fifteen of the bank's African and Middle East client countries in which there were exceptionally large gaps between girls' and boys' primary enrollment rates. Emphasis was also placed on improving primary education in sixteen Sub-Saharan African countries in which educational attainment was well below the level required to achieve sustainable economic growth and poverty reduction.

Over the decades—and particularly in recent years—World Bank activities have attracted critics, who object to two features of the bank's operations. First, World Bank plans make clear that the sorts of projects the bank will finance are those that bank officials believe will contribute significantly to improving the economic growth of less modernized nations, particularly of nations in Sub-Saharan Africa, Southeast Asia, and parts of Latin America. Critics have charged that the projects which the bank insists the recipient nations carry out are often ones that will not contribute sufficiently to the welfare of the general populace, and especially to the welfare of the poor. In the critics' opinion, large sums are expended on the construction of infrastructure facili-

ties that do not fulfill the needs of most people. The bank has also been faulted for imposing harsh conditions on borrowing nations. The loan conditionalities have included such controversial structural adjustment policies as monetary austerity, high user fees for primary education and health care, inequitable privatization of state-owned enterprises, and premature liberalization of financial markets.

Second, the funds that the bank has provided have usually taken the form of loans that must be repaid with interest. Therefore, according to dissatisfied observers, poor countries incur large debts whose repayment draws money away from such activities as providing education and health protection for the populace.

All of the blame for ostensible waste and damage has not been heaped on such aid agencies as the World Bank. Officials in the recipient nations have also been faulted for skimming off part of the aid money for their own use and for not resisting the temptation to accept loans that will place their nations in economic jeopardy.

Strategies adopted by the bank's critics have included conducting public demonstrations, publicizing the critics' complaints through mass communication media, and urging the boycott of World Bank bonds. The bank has traditionally raised nearly 80 percent of its funds by issuing bonds in private capital markets, and a growing number of organizations that invest in bonds have boycotted their purchase of World Bank bonds (Center for Economic Justice 2003). Bank officials have responded to such charges by citing examples of progress made by developing nations in projects conducted with bank funds, including projects in the educational sector.

To summarize, foreign aid agencies play an important role in the educational development of needy nations by furnishing money, advice, and personnel to support projects that the agencies deem important for the recipient nations' progress. Observers of international-aid agencies sometimes ask whether the selected projects and the way they are carried out actually do produce their supposed benefits without undesirable side effects.

EDUCATIONAL REFORM IN JAPAN

Three major reforms of the Japanese education system have been attempted over the past two centuries.

The first and third changes were the result of Japanese political and educational leaders seeking to promote their society's socioeconomic development by importing educational practices from abroad. The second reform was forced on Japan by foreign invaders.

The first reform appeared after the mid-1800s, when the newly empowered Meiji regime sought to modernize the nation's education system with borrowings from Germany, France, Britain, and the United States. The motivation of the Meiji leaders was to move their society from a semifeudal condition to that of an industrialized state, capable of competing effectively with the industrialized nations of Europe and North America.

The second reform occurred after World War II as the United States' occupation forces obliged Japanese educational authorities to alter their existing system so it would resemble the dominant North American model. The aim of the U.S. occupation government was to eliminate Japan's pre-World War II militaristic educational practices by substituting American educational goals and teaching methods.

The third major revision, begun in the 1980s and most dramatically implemented in the years 2002–04, reduced the complexity of the curriculum, replaced the six-day school week with a five-day week, stressed individualistic critical thinking, embraced internationalism, and decentralized decisionmaking in the public university system. A key stimulus behind the reform was the desire of political leaders, headed by Prime Minister Nakasone Yasuhiro during his period in office (1982–87), to stimulate greater creativity among Japanese students and thereby inject more indigenous innovations into the country's scientific and socioeconomic life.

DIVERSITY WITHIN INTERNATIONAL EDUCATION

Throughout this chapter, the international perspective from which education has been viewed has emphasized ways in which nations' education systems are similar, particularly in the components of schooling, the trends in educational development, and factors that promote development. However, the manner in which these common characteristics work out in individual nations is influenced by a wide range of factors that make education in each society unique—different from the ex-

act form of education in other societies. Those include such variables as a society's geographic size and character, political structure and goals, economic strength, health practices, ethnic and religious composition, cultural traditions, population size and growth rate, transportation and communication facilities, and more. Throughout this chapter, such variables have not been highlighted but, rather, have been reflected only in an indirect and often casual fashion in the illustrations of

different nations' educational practices. As the illustrative cases have implied, it is useful not only to adopt an international perspective that focuses on ways education systems are similar but also it is important to recognize the ways influential variables in society account for why one educational system differs from others in the way it fits into the international perspective.

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IV

PHYSICAL, MOTOR, AND COGNITIVE DOMAINS

PSYCHOMOTOR DOMAINS

How do individuals learn movement skills and acquire skill? How do young children develop movement patterns? What changes occur, motorically, across a person's lifespan? What are skillful performances? And how do the central nervous system and the environment control the execution of our movements? These questions are the concern of the entries included in this chapter. The chapter contains entries that focus on the disciplines, fields, and areas of study that deal with human movement and skill. The term *psychomotor domains* is used here to highlight the territories or fields of thought and action that are concerned with human movement, and the acquisition and development of motor skills, and skillful performances. The word *psychomotor* became popular in the late 1950s when Benjamin Bloom and David Krathwol published a handbook entitled *Taxonomy of Educational Objectives* (1956). Bloom and his associates identified three categories or educational domains that served to classify objectives and the types of learning that accrue in educational settings: cognitive—knowledge and intellectual thinking skills; affective—attitudes, values, appreciations, and emotions; and psychomotor—movement skills and abilities. The psychomotor domain categorized human movement from a psychological perspective. Not to be confused with Bloom's work, the term psychomotor domains in this chapter is used to describe disciplines, fields, and areas of study and research concerned with human movement and skill.

As a word element, *psycho* pertains to the human mind and soul; mental phenomena as opposed to physical. The word *motor* in a general sense is defined as pertaining to one who, or that which imparts motion or causes action. In a more specific and physio-psychological sense, the word *motor* refers to the effect or the phase of any neurological process—such as the innervation of muscles by nerve

impulses—that causes movement. Thus, psychomotor may be viewed as a term to describe the branch of the science of human movement that emphasizes the study of relationships or interactions between the environment and the mind-body—as exhibited in the nervous system—and the behavioral results seen as movement patterns, motor skill, and skillful performances.

THE PSYCHOMOTOR DOMAINS OF INTEREST

In this chapter, the disciplines or fields of motor development, motor learning, movement science, physical education, and adapted physical education are the psychomotor domains of interest. Also included as an entry is an area of study referred to as performative knowledge and the topic of skillful performances. This entry is relevant to the grouping of psychomotor domains in that it draws from the disciplines of philosophy and psychology to provide a description and an understanding of skillful performances from a psycho-philosophical perspective. It should be noted that there are other disciplines and fields that focus on the study of human movement. For example, kinesiology, biomechanics, motor control, physiology, and exercise physiology all study human movement from their own unique perspective. Although, they are disciplines or fields in their own right, some are briefly discussed in the movement science entry (e.g., biomechanics); others that have more of a physio-biological base rather than a psychological one are not included in the chapter (e.g., physiology and exercise physiology).

The psychomotor domains presented are portrayed by the entry writers in an introductory manner. Each domain has a rich history, and a body of knowledge and research that is used by scientists and practitioners in a variety of medical, health,

athletic, and educational professions. For example, scientists and practitioners in physical therapy, physical education, and adapted physical education all make use of the knowledge generated by each of the domains. While it is desirable to know each domain in depth, the purpose of this chapter is to provide readers with a general overview of each domain—focusing on its historical underpinnings, its current theoretical perspectives and issues, and the frameworks that guide the work of the scientists and practitioners. Each domain has its own unique research emphasis that has contributed to a greater understanding of how learning occurs, how individuals develop and age, how teachers facilitate the acquisition of skill, and the neural and behavioral processes involved in motor acts and skillful performances. Although each domain has a particular vantage point, there is some overlap (e.g., motor learning and motor development).

Today, more than in any other time in the history of these domains, a multidisciplinary approach is recommended for a more comprehensive understanding of human movement and skill. Movement science, defined as either a body of knowledge or as an academic discipline (including biomechanics, kinesiology, motor learning, and control) best represents a more multi- and inter-disciplinary approach to the understanding of human movement and skill. *Human Movement Science*, a journal devoted to pure and applied research, provides a forum that brings together the research on human movement from the disciplines. Currently, in the United States, Canada, Australia, and England there are a vast number of degree programs on the undergraduate and graduate level in colleges and universities offering courses in movement science and/or movement sciences. Students emerge from such programs prepared to either enter professions upon graduation or enter advanced education or medical programs that lead to a host of careers and professions. For example, students may be prepared to enter such professions as teaching, coaching, physical therapy, occupational therapy, speech therapy, podiatry, or sports medicine. Some individuals are prepared for positions as directors and administrators of youth activity programs at community centers. And others may be prepared to serve as clinicians at rehabilitative centers or researchers at university laboratories serving populations of healthy and impaired children and adults.

For example, under the directorship of Harriet Williams, a motor development specialist and researcher, the University of South Carolina operates a Perceptual-Motor Development Laboratory (PMD Lab). The PMD Lab conducts programs of motor development enrichment, rehabilitation, and research, and it provides evaluation services to a wide population of individuals. The PMD Lab employs a staff of professionals that includes a physical therapist, a developmental pediatrician, a speech therapist, a specialist in childhood obesity, and specialists in motor activity and research.

Also, it is important to know that the study of human movement and skill encompasses a lifespan perspective focusing on the periods of infancy, childhood, adolescence, and adulthood in healthy and disabled individuals. In particular, professionals affiliated with adapted physical education in schools and clinical settings concentrate on understanding movement disorders and abnormalities. Their intent is to provide individuals with educational experiences or rehabilitative services.

The movements and skilled performances of concern include a broad range and a wide spectrum. For example, the movement patterns that are studied by scientists and practitioners of the domains can range from simple ones such as crawling and walking to more complex ones such as driving a standard-shift car and operating a jet-engine airplane. A pianist's rapid finger movements in a concerto, a basketball player making a three-point shot, a young child's first steps and words, a chess player's strategic actions and decisions, a quarterback running an offense play, a stroke patient relearning to walk up stairs, a wheelchair-bound adolescent passing the ball in a basketball game, and a ballet dancer's leaps across the stage are all part of the vast terrain of movements, motor tasks, and skilled-performance phenomena that is studied.

TAXONOMIES OF HUMAN MOVEMENT AND MOTOR TASKS

Over the past three decades, a number of taxonomies and classifications systems that categorize human movement, tasks, and skills were developed by researchers and practitioners to carry out their work. Although Bloom and his associates in 1956 identified the psychomotor domain for purposes of classi-

fying educational objectives, Anita Harrow in 1972 developed the taxonomy of the domain and published it in a book entitled *A Taxonomy of the Psychomotor Domain: A Guide for Developing Behavioral Objectives*. The taxonomy includes six categories of human movement: reflex movements (e.g., the stretch reflex); fundamental movements (e.g., crawling); perceptual movements (e.g., catching a ball); physical abilities (e.g., enduring a basketball game); skilled movements (e.g., playing a guitar); and nondiscursive communication (e.g., gesturing or using the body to express feelings or ideas). The taxonomy achieved some popularity with practitioners and researchers.

However, a taxonomy that gained recognition in the 1970s, and was used then and now by a substantial number of researchers and physical education teachers, was one developed by A. M. Gentile and her associates at Teachers College, Columbia University. The taxonomy was introduced, in its initial stage, in 1972 in an article in *Quest*, a professional journal for practitioners and scholars in physical education. It was later described, in greater detail, in 1975 and in 1981 to wider audiences in two published works, *Mouvement* (Gentile et al. 1975) and *Developing Sport Skills* (Spaeth-Arnold 1981). Much of the research in motor learning as well as the curricular experiences designed by physical education teachers focused on one or more of the categories of movement included in the taxonomy. The taxonomy, as presented in *Developing Sport Skills* by Ree K. Spaeth-Arnold, identified two major dimensions and subdimensions for purposes of describing and analyzing goal-directed movements and skill. The dimensions and subdimensions included: (1) the nature of the performance environment, described as either (a) closed—to denote environments that are stationary, that is nothing is moving in the physical environment, or (b) open—to denote objects and people moving in the environment; and (2) the nature of the movement, described as either (a) body stability—to represent a person maintaining stability or balance with or without manipulation of an object as in standing on a balance beam, and standing on balance beam while juggling, or (b) body transport—to represent a person moving or transporting their body through space with or without manipulation of an object as in walking, and walking across a street while holding packages. In 1981, the ideas and concepts surrounding the taxonomy (i.e., open and closed

performance environments, skills and tasks) along with an explanation of the factors influencing motor skill acquisition (i.e., the types of feedback given to performers) were put forth by Anne Rothstein, Linda A. Catelli, Pat Dodds, and Joan Manahan in a book published by the American Alliance of Health, Physical Education, Recreation and Dance entitled *Motor Learning: Basic Stuff Series*. In 1987, the taxonomy was adapted for the field of physical therapy by A. M. Gentile in the first edition of *Movement Science: Foundations for Physical Therapy in Rehabilitation*, and then further developed in a second edition of the book in 2000. The taxonomy has served as a conceptual mechanism for scientists to conduct their research, and it has served as a curriculum and assessment tool for practitioners and therapists in the psychomotor domains.

EMERGING DOMAINS IN PERSPECTIVE

It should be emphasized that this is a new day in the study of human movement and a new era for the psychomotor domains. There are large numbers of individuals in education, sports, athletics, health, medicine, music, and art who use the knowledge and research from the psychomotor domains. As aptly presented by Charles Shea and David Wright in their book *An Introduction to Human Movement* (1997), a renewed interest on the part of the general public of the importance of physical activity for health purposes has opened a wide array of career and professional opportunities for students beyond teaching physical education in schools. Also, the events occurring in academe and society in the 1990s helped to frame the domains in new and different ways.

Traditionally, the professional programs of physical education in colleges and universities prepared individuals to teach in schools and later to work in fitness, health, and sport centers. In the 1960s and 1970s many departments of physical education in colleges and universities in the United States housed courses or programs in what was referred to at the time as subdisciplines of physical education—motor learning, motor development, motor control, exercise physiology, kinesiology, and biomechanics. In 1984, in a feature article in a professional journal for librarians entitled *Collection Building*, I was asked to provide a comprehensive definition of

physical education for purposes of developing and arranging collections of books and materials for school and public libraries. In the article, entitled “Physical Education in the 1980s: A Guide for Developing Children’s and Young Adult Collections,” physical education was defined, as it existed then in higher education, as an academic discipline and as a profession. As a profession, it had as its focus the training of teachers to work primarily in schools. Pedagogical skills, and knowledge drawn from the sciences (e.g., physiology) as well as knowledge and skills related to sport, dance, games, and exercise was the body of knowledge acquired by students choosing to major in the professional track. Those who went on to graduate work in the professional track studied pedagogy. Some became curriculum and teaching specialists and found positions in teacher-education programs in colleges and universities. Others became consultants, administrators, scholars, or researchers in the area of curriculum and teaching of physical education. As an academic discipline, physical education’s body of knowledge focused on the themes of movement, fitness, and the behaviors associated with sport participation. Historically, it drew upon knowledge and research from other established disciplines: anatomy, kinesiology, physiology, sociology, physics, philosophy, and history. In the 1960s and through to the early 1980s it developed subfields or subdisciplines which provided the knowledge and research necessary to call physical education an academic and scientific discipline. During the period, (circa 1960 to 1985) the subdisciplines, which contributed to the scientific foundation of the discipline of physical education, were defined as:

Exercise Physiology—the study of the human body when placed under the stress of exercise or vigorous activity.

Motor Learning—the study of how an organism acquires skill and performs a movement.

Motor Control—the study of the underlying neural and behavioral mechanisms and processes that are operative during movement.

Kinesiology—the study of motion and the principles of anatomy.

Biomechanics—the science and principles of physics or mechanics in relation to the movement of living things.

Sport Psychology—the examination and analysis of psychological aspects of sport participation and performance.

Sport Sociology—the study of the social dimensions of behavior during sport situations.

History of Sport—the recording, comparisons, and interpretations of past events related to sport and physical education.

Philosophy of Sport—the examination, analysis, and creation of theories, concepts, and issues related to sport, movement, and physical education.

Sport Pedagogy—the study and analysis of teaching movement and sport skills.

At that time, it was recognized that many of the subdisciplines had emerged from an established discipline referred to as the parent discipline. For example, psychology was the parent discipline of motor learning and motor development, and physiology was the parent discipline of exercise physiology. The scholars and researchers in these subdisciplines were interested in producing new knowledge, and their investigations were not necessarily directed at producing information that was immediately applicable to a teaching-learning situation. As subdisciplines of the discipline of physical education they pursued knowledge for its own sake. Students majoring in physical education took courses associated with one or more of the subdisciplines (e.g., motor learning, exercise physiology, kinesiology). Some students went on to concentrate on a subdiscipline and received training as researchers or scholars while others continued in an allied field or discipline. With the emergence and growing strength of the subdisciplines, often overshadowing the profession of teaching physical education, a number of faculties of physical education in universities changed the names of their departments. Beginning in the early 1970s and through the 1990s many faculties in colleges and universities retitled their departments using such names as the Department of Physical Education

and Exercise Science, Department of Kinesiology, Department of Sport Studies, Department of Human Kinetics, and Department of Human Movement Studies. The name changes were to more accurately reflect (1) the type of scholarly work and research that were conducted by the faculties, (2) the type of courses and programs of study that were offered by the department, (3) the varied professions students were preparing to enter, and (4) the broader population of students the department served. For example, in the late 1970s the Department of Physical Education at Teachers College, Columbia University changed its name to the Department of Movement Sciences and Education. The department offered courses on the graduate level in motor learning, motor control, and biomechanics. It was not uncommon at that time to have physical therapists, special educators, and physical educators all taking these courses. The focus was the study of movement processes involved in learning and performing perceptual-motor skills, and motoric rehabilitation. In 2004, at Teachers College, Columbia University, the programs in physical education and the program in motor learning and control all reside in the Department of Biobehavioral Sciences, representing yet another shift or change. Today, motor learning courses have wide appeal and applicability. For example, the Fashion Institute of Technology in New York offers a course in motor learning for individuals interested in designing developmentally appropriate educational toys for commercial companies. Physical and occupational therapists have courses in motor learning and control as part of their required course of study and professional development. And it is not uncommon for professionals in the field of ergonomics—the study of the problems of people adjusting to their environment—to make use of the knowledge and research from the domains of motor learning and motor development.

Beginning in the 1990s movement science or the term movement sciences began to dominate as a title for departments in colleges and universities as well as a title for master's and doctoral degree programs. Some of the subdisciplines of physical education that existed in the 1960s moved to departments housing the parent discipline in a university (e.g., sport psychology to psychology). Others either disappeared (e.g., philosophy of sport) or they were retained as course offerings. Today, one finds a number of university departments and

degree programs with Movement Science(s) or Kinesiology as their title.

This truly is a new day in the study of human movement and a new era for the psychomotor domains. New professionals are prepared to meet the needs of the society. These professionals are carving new territories of research, action, and influence. They are the century's researchers, motor teachers, and facilitators who work more collaboratively with one another and who work in more interactive ways with their students, patients, and clients. This is certainly the case as seen in movement science. Defined as a discipline, and as one of the psychomotor domains, movement science has developed a significant body of cross- and inter-disciplinary research, theories, and knowledge. It has served, in many ways, as a catalyst for new lines of research fostering more collaborative work among researchers. For example, the collaborative research of Esther Thelen, Gregor Schoner, Christien Scheier and Linda Smith, which focuses investigations on the dynamics of goal-directed reaching in infants and on the interleaved dependencies among motor, perceptual, and cognitive development, surely represents pioneering work of the interface of movement science and cognitive science (Thelen et al. 2001). In this decade, we are witnessing closer ties among the psychomotor domains, and stronger linkages between movement science and cognitive science.

This chapter includes six entries. The first two entries focus on the domains of motor development and motor learning. The third and fourth entries concentrate on physical education and adapted physical education, respectively. The fifth domain deals with movement science. And the sixth and final entry is devoted to performative knowledge and a descriptive analysis of skillful performances from a psycho-philosophical viewpoint. What all the entries have in common is a focus on human movement, skill, and skillful performances from a psychomotor perspective.

Linda A. Catelli

MOTOR DEVELOPMENT

Before taking a closer look at motor development, we must first understand what the term development means. Development in its simplest form is a change in

function over time. As such, development encompasses all change, both positive and negative, in the cognitive, affective, and motor domains of human behavior. Understanding development is of keen interest to parents, educators, and coaches, as well as physicians, therapists, and scholars. Development is studied across the lifespan and is viewed in terms of large blocks of time that are frequently studied from the standpoint of prenatal, infant, child, adolescent, and adult development, as well as development in old age. Jack Keogh and David Sugden in *Movement Skill Development* (1985) have appropriately defined development as “adaptive change toward competence.” When viewed from this perspective, development is a lifelong process of adjusting to and compensating for change in an effort to gain and maintain competence across all domains of behavior.

MOTOR DEVELOPMENT DEFINED

Building on Jack Keogh and David Sugden’s definition of development, motor development in its simplest form may be defined as adaptive change toward competence in motor behavior. As such, motor development is studied both as a product and as a process. Knowledge of the products (outcomes) and the processes (underlying mechanisms) of changes in motor behavior over time provide us with information that is vital to understanding the individual on his or her journey throughout life.

In terms of product, understanding motor development first provides us with descriptive profiles of developmental change across the lifespan, thereby providing us with information about the “what” of development. Namely: (1) What are the typical phases and stages of motor development across the lifespan? (2) What are the approximate age-periods associated with typical markers of motor behaviors? and (3) What do we know about predictable patterns of change in motor behavior that are typically seen in normally developing individuals as compared to those who may be either developmentally delayed or developmentally advanced? In short, descriptive views of motor development equip us with a better understanding of what lies ahead in anticipated developmental change.

In terms of process, understanding motor development helps us address the mechanisms that underlie developmental change. We gain information about the “why” and “how” of development. Namely: (1) How does change occur as it does across the lifespan? (2)

Why is developmental change nonlinear and self-organizing? and (3) How do heredity and the environment interact with the requirements of the motor task as one strives for greater motor control and movement competence? In short, a better understanding of the mechanisms that underlie motor development provides us with explanations of why change occurs as it does (Gallahue and Ozmun 2005).

HISTORICAL UNDERPINNINGS

The years from about 1930 through 1945 are characterized as the “maturational period” and those from 1946 to about 1980 as the “normative and/or descriptive period” for the study of motor development. Jane Clark and Jill Whitall in “What is Motor Development” (1989) describe the time period of the 1980s as the “process-oriented period.” In fact, the study of motor development began with a process orientation (studying the underlying biological processes governing maturation), then shifted to a product orientation (describing the mechanics of various stages of movement skill acquisition, and developing normative criteria for a variety of motor performance measures), and subsequently moved back to a process orientation (explaining the processes causing change in motor behavior over time). Important research is now being conducted throughout North America and much of the rest of the world on the critically important topic of motor development from infancy through adulthood.

Maturational Period

As the youngest of the movement sciences, motor development was first viewed from a maturational perspective. Maturation was explained as a process overwhelmingly controlled by internal genetic factors rather than those that are external or environmentally based. The maturation perspective contended that development is primarily a function of inborn biological processes that result in a universal sequence, or stages, in movement skill acquisition. Theorists further contended that although environmental factors might influence developmental rate, the effects were only temporary because of the powerful influence of one’s genetic inheritance.

In an attempt to prove their point, co-twin control studies were introduced as a means of demon-

strating the power of heredity over the influences of the environment. The studies of Arnold Gesell and Helen Thompson (1934) and Myrtle McGraw (1935, 1940) are classics in the use of the co-twin control method of studying development. Their research provided considerable insight into the influence of augmented and restricted practice on the acquisition of various movement skills, and raised numerous questions concerning the effects of early practice.

The contention was that if two infants with identical sets of genes were given different experiences (one with specific training experiences and the other without these specific experiences), then it would be possible to demonstrate the relative influence of both heredity and the environment on learning those skills incorporated into the study design. Results tended to indicate that although the rate at which the children acquired selected movement skills varied somewhat between the twins, the sequence of acquisition was universal and generally invariant.

The results of these studies were the first to examine the sequence of movement skill acquisition in infancy and childhood and at the same time identify differences in the rate of development among those in this age group. As such, they had a profound impact on the study of movement skill learning and, for a time, strengthened the maturational point of view.

Although the surge of research initiated by these scholars was largely motivated by their interest in the relationship of maturational and learning processes to cognitive development, their separate studies attained remarkably similar results, and chronicled the well-known sequences of motor development during infancy. Their naturalistic observations of children provided a great deal of information about the sequential progression of normal development from the acquisition of early rudimentary movements to mature patterns of behavior.

Normative and Descriptive Period

From about 1940 to 1980 a limited amount of work was done in terms of describing the typical motor performance capabilities of school-age children. Led by Anna Espenschade, Ruth Glassow, and G. Lawrence Rarick, these individuals focused on developing age-group norms for children on a variety of motor performance tests (Rarick 1981). Throwing distance, running speed, and jumping for distance

and height are examples of the motor performance items tested and normed for various age groups.

Ruth Glassow also played an important role in a second descriptive movement in which the biomechanics of a variety of fundamental movement skills was described. Lolas Halverson and her colleagues Mary Ann Robertson and William Harper (1973), and Harriet Williams (1985) continued this work with longitudinal observations of children. The important book *Fundamental Motor Patterns*, by Ralph Wickstrom (1983), and the research conducted by Vern Seefeldt and his associates, John Haubenstricker and Crystal Branta (Branta, Haubenstricker, and Seefeldt 1984), on fundamental movement skill acquisition are important because they provided important information for educators relative to age-related change in motor development and set the stage for the exciting research that characterizes the study of motor development today.

Process-Oriented Period

From the early 1980s to the present the emphasis on study in motor development again shifted dramatically. Instead of focusing on the product of development as with the normative and/or descriptive approaches of the preceding decades, emphasis shifted back to attempting to understand the underlying processes involved. Although the critical importance of heredity was recognized, complementary importance was now given to the conditions of the learning environment and the requirements of the movement task. In other words, motor development is now considered to be a dynamic multiple-system process rather than being controlled solely by the central nervous system as in the maturational perspective.

The current process-oriented period was grounded in chaos theory and later extended to physical, chemical, and biological systems. The seminal work of Peter N. Kugler, J. A. Scott Kelso, and Michael T. Turvey in 1982 was the first to apply this theoretical perspective to the control and development of human motor behavior. Three guiding principles underlie what has become known as systems theory or dynamical systems theory. First, as described by Esther Thelen and Beverly Ulrich in *Hidden Skills* (1991), the body is viewed as being composed of several systems (neural, muscular, skeletal, perceptual, mechanical, etc.) that are self-organizing and can form

patterns of behavior that come about exclusively from the interaction of the component parts. Second, the body's systems and its various subsystems self-organize in complex and cooperative ways based on the requirements of the specific movement task and in response to various affordances and rate limiters. Third, development is a discontinuous process with new patterns of movement replacing old ones. These guiding principles serve as the theoretical construct underlying much of the motor development research being conducted today.

CURRENT PERSPECTIVES AND ISSUES

Although research in motor development is generally viewed as the study of change across the lifespan, most researchers restrict their investigations to broad age classifications that are used as marker variables of motor behavior. Researchers therefore tend to focus on the use of infants, children, adolescents, or adults in order to learn more about the causes of change in motor behavior over time.

It is important to know about the products of development in terms of what people are characteristically like during typical phases and stages of their lives (description). It is equally important, however, to know why these changes occur (explanation). To this end many developmentalists are currently looking at explanatory models in an attempt to understand more about the underlying processes that affect development.

Ecological theory, or contextual theory, as it is sometimes called, attempts to be of practical benefit, by being both descriptive and explanatory. Ecological theory views development as occurring as a function of the environmental context and historical timeframe in which one lives. The study of human ecology from a developmental perspective is a matter of studying the relationships of individuals to their environment and to one-another. Currently the most popular ecological approach among motor developmentalists is dynamic systems theory. The following represent a sampling of current research foci:

The study of how goal-oriented behavior develops in infants from their early erratic movement behaviors

The study of delayed motor development in infants with Down syndrome and other developmental difficulties

The study of children with Developmental Coordination Disorder

The study of the benefits and limits of early motor training

The role of physical activity and nutrition in preventing and/or reducing childhood obesity

The influence of intense training on anatomical structure and physiological functioning in preadolescent youth

The influence of balance training with the elderly in reducing the incidence of injury from falls

RESEARCHERS, SCHOLARS, AND MOTOR TEACHERS

Leading the field in motor development are the researchers who answer important research questions and the scholars and teachers who attempt to synthesize these findings and make practical application to individuals across their lifespans.

Prominent Research Scholars

The following represents a partial list of active motor development researchers and the particular age group they study. It should be noted that most of these tend to focus their efforts on infant or childhood motor development. This is due in part to tradition but more importantly to the sheer volume of developmental change that occurs during these relatively short timeframes.

Jane Clark, University of Maryland (childhood motor development)

Daniela Corbetta, Purdue University (infant motor development)

Clersida Garcia, Northern Illinois University (childhood motor development)

Jere Gallagher, University of Pittsburgh (childhood motor development)

Nancy Getchell, University of Delaware (child-

hood through adult motor development)
 Melanie Hart, Texas Tech University (childhood motor development)
 Jody Jensen, University of Texas, Austin (childhood motor development)
 Rosa Angulo-Kinzler, University of Michigan (childhood motor development)
 Robert Malina, Michigan State University (growth and motor development)
 Mary Ann Robertson, Bowling Green State University, Ohio (childhood motor development)
 Linda Smith, Indiana University (infant cognition and motor development)
 Wayneen Spirduso, University of Texas, Austin (adult motor development and aging)
 Esther Thelen, Indiana University (infant motor development)
 Beverly Ulrich, University of Michigan (infant motor development)
 Jill Whitall, University of Maryland, Baltimore (childhood through adult motor development)
 Kathleen Williams, University of North Carolina, Greensboro (childhood motor development)
 Wojtek Chodzko-Zajko, University of Illinois (adult motor development and aging)

Textbook Authors

The textbooks written by the authors that follow represent those in primary use in North America and beyond on the topic of motor development. The basic intent of these texts is to synthesize current knowledge on the topic and to provide teachers and students of motor development with up-to-date and relevant information.

Carl Gabbard, *Lifelong Motor Development* (2000)
 David Gallahue and John Ozmun, *Understanding Motor Development: Infants, Children, Adolescents, Adults* (2002)
 Kathleen Haywood and Nancy Getchell, *Life Span Motor Development* (2001)
 Robert Malina, Claude Bouchard, and Oded Bar-Or, *Growth, Maturation, and Physical Activity* (2004)
 Gregory Payne and Larry Isaacs, *Human Motor Development: A Lifespan Approach* (2002)

Motor Development Teachers And Facilitators

Parents, teachers, coaches, and therapists all have a keen interest in understanding and using the information generated by the work of researchers in motor development. A select number of public research universities offer opportunities for advanced study in motor development. These include:

Delaware: University of Delaware
 Illinois: University of Illinois
 Northern Illinois University
 Indiana: Indiana University
 Purdue University
 Maryland: University of Maryland
 Michigan: University of Michigan
 Michigan State University
 Minnesota: University of Minnesota
 South Carolina: University of South Carolina
 Texas: University of Texas
 Texas A & M University
 Texas Tech University

Field professionals are being prepared for careers as teachers, coaches, and therapists at numerous colleges and universities across North America. Some of the very best teacher education programs place emphasis on the importance of understanding motor development and applying that knowledge to developmentally based physical education. These include:

Arizona: Arizona State University
 California: California State University at Bakersfield, Chico, Fullerton, Long Beach, and Sacramento
 Colorado: University of Northern Colorado
 Delaware: University of Delaware
 Florida: University of South Florida
 Idaho: Lewis and Clark State College
 Illinois: Illinois State University; Eastern and Northern Illinois State Universities
 Indiana: Indiana University; Ball State and Indiana State Universities
 Iowa: University of Northern Iowa
 Kansas: University of Kansas; Emporia State University
 Louisiana: Louisiana State University

Massachusetts: Springfield College
Michigan: Eastern Michigan University
Minnesota: Bemidji State University; University of Minnesota
New Hampshire: University of New Hampshire
New York: Hofstra University; Columbia University Teachers College; Ithaca College
Ohio: The Ohio State University; Bowling Green, Kent State, and Wright State Universities
Pennsylvania: Penn State University; Temple University, West Chester State University; University of Pittsburgh
South Carolina: University of South Carolina and South Carolina State University
Tennessee: University of Tennessee, East Tennessee State University
Virginia: University of Virginia, Virginia Tech University
Wyoming: University of Wyoming

SUMMARY

Understanding motor development and being able to make practical application of both the process and products of motor development are essential to effective parenting, teaching, coaching, and rehabilitation across the lifespan. As the body of motor development knowledge continues to expand researchers provide field professionals with important insights. These insights enable learning to be maximized and development to positively impact infants, children, adolescents, and adults.

David L. Gallahue

MOTOR LEARNING

People perform complex motor skills every day in a variety of contexts. People walk on crowded sidewalks, run while carrying packages to catch a bus, take groceries from a bag and put them into cupboards, hit a tennis ball while serving in a tennis match, kick a soccer ball for a goal, and so on. In each of these situations, the person has acquired the requisite motor skills needed to perform the skill successfully. It is this acquisition of skills that the study of motor learning has traditionally investi-

gated. Researchers have studied motor skill acquisition from various levels of investigation, which range from the behavioral to the neural. The focus of this entry is on the behavioral study of motor learning, which, although historically related to cognitive skill learning, has evolved as a distinct domain of study.

HISTORICAL UNDERPINNINGS

As a scientific area of inquiry, the behavioral study of motor learning is quite young. Formal research investigations of motor skill learning did not begin to emerge until the late nineteenth century, primarily in the newly developing discipline of psychology. According to historical reviews of motor skill acquisition research, it is difficult to identify a specific “founder” of this area of research, although the earliest published research occurred in the 1890s. According to the historical overview by Jack Adams (1987), motor learning research has evolved from that beginning through three distinct historical periods: Early (1880–1940), Middle (1940–70), and Present (1970 to the present).

William Bryan and Noble Harter published the most impressive example of the earliest research. Their experiments examined the characteristics of novice telegraphers and how years of experience influenced their job related skills, which required the sending and receiving of telegraphic messages. In an insightful retrospective of those experiments, Timothy Lee and Stephan Swinnen (1993) described three current areas of motor skill learning for which the Bryan and Harter studies laid important groundwork: performance variation, the nature of change throughout the course of skill acquisition, and automaticity. By observing the sending of messages in American Morse code, which involves the rapid keying of sequences of long and short durations of taps, the researchers provided evidence that motor skill is acquired in distinct stages, each of which has specific performance-related characteristics. And, the attainment of expertise, which they inferred from the comparison of experienced and inexperienced telegraphers, requires time and practice. With respect to these findings, it is important to point out that since that time, the study of distinct learning stages for motor skill acquisition has resurfaced from time to time, with formal models of these stages proposed

first by Paul Fitts and Michael Posner (1967), with additional models proposed by other scholars, most significantly Jack Adams (1971) and A. M. Gentile (1972). It is noteworthy that almost a century after the Bryan and Harter experiments, a rekindling of interest began to emerge, and continues today, in the study of expertise as it relates to motor skills.

The work of Edward L. Thorndike at Teachers College, Columbia University, in New York City (e.g., 1913) had a significant early influence on present-day investigations of motor skill learning. Thorndike's important contribution can be seen in his research concerning issues related to our understanding of transfer of learning and of the role of knowledge of results in learning. With respect to transfer of learning, he proposed and provided research evidence to support the "identical elements theory" as an explanation for this learning phenomenon. That is, transfer of learning is based on the similarities of stimuli and responses in two situations. Increasing the amount of identical stimuli and response characteristics yields increasing amounts of transfer. Thorndike's other significant impact on motor skill learning research related to his Law of Effect, which he supported with experiments involving verbal as well as motor skill learning. Briefly, Thorndike's Law of Effect proposed that when a learner's response receives a reward, the response is strengthened, which increases the probability of that response occurring again. Eventually, with sufficient strengthening, the response becomes the predominant one for the stimulus, and is therefore learned. According to Jack Adams in his discussion of his closed-loop theory of motor learning, it was experiments such as those by Thorndike that provided the foundation for later investigations on the effects of knowledge of results on motor learning (see Adams 1971).

Other investigations prior to World War II focused primarily on topics such as practice distribution, long-term retention, and individual differences. A brief look at the first two of these topics will provide some insight into the manner in which topics were investigated during this early period of motor learning research. The study of practice distribution was of initial interest to determine the influence on performance of rest periods between practice trials. Early studies attributed the negative learning effects of massed practice schedules to fatigue because of the short

amount of rest between trials of active practice. However, with the advent of learning theories by scholars such as Clarke Hull (1943), researchers began to consider practice distribution as a variable that temporarily influences practice performance rather than the long-term learning of a skill. In light of this view, it is important to note that this distinction between variables that influence practice performance and those that influence skill learning continues to be an important one made by present-day motor learning researchers.

World War II was a distinct watershed for motor learning research activity. Prior to this time researchers were often motivated to use motor skills in their experiments as a convenient way to test a psychological construct or general theory rather than to investigate issues specifically related to the learning of motor skills. But, during World War II, researchers from university psychology programs who typically investigated the learning of verbal skills were assigned to military laboratories in which they had to investigate specific human motor skill performance and training issues. One result of this increased focus on motor skill learning was a surge in research concerning individual differences, especially in terms of the relationship between motor abilities and motor skill performance, most notably with regard to the selection of personnel for training to be airplane pilots. However, because these pilot selection programs, which were predominantly based on the identification of motor abilities as the basis for predicting who should be trained to become pilots, had not resulted in a great deal of success, researchers redirected their efforts more toward the actual training of personnel for military tasks.

Although the interest in motor skill acquisition continued for some time after the conclusion of World War II, primarily because of continued government funding for this type of research, psychology scholars in the 1960s began to show a general loss of interest in the study of motor skill acquisition. However, a revival of research activity in this area was generated by researchers in physical education, primarily because of their interests in motor skill learning and performance. Leaders in this effort included Franklin Henry, at the University of California, Berkeley, A. W. Hubbard, at the University of Illinois, and A. T. Slater-Hamel, at the Uni-

versity of Indiana (see Schmidt and Lee 1999). Also influential in the 1960s was the publication of several motor learning textbooks by professors in physical education. In the following decade, Jack Adams, a University of Illinois psychologist who maintained interest in motor skill learning, and Richard Schmidt, who was then in the physical education department at the University of Southern California, published influential formal theories of motor skill learning (Adams 1971; Schmidt 1975). Both theories were based on the information-processing paradigm that predominated the study of human learning at that time. An important impact of the publication of these theories was the stimulation of a great deal of research by a new era of young researchers who now had specific theory-based hypotheses on which to develop experiments. As a result, the study of motor learning rebounded with the publication of numerous research articles concerning topics such as the role of knowledge of results, transfer of learning, and the stages of motor learning.

CURRENT PERSPECTIVES AND ISSUES

Although research topics of present-day researchers are in many ways similar to those investigated prior to the publication of the motor learning theories of Adams and Schmidt, the approach taken differs dramatically. Researchers have increasingly adopted a theory-based, hypothesis-testing basis for their investigations of motor learning topics. For example, Adams's theory focused heavily on the influence of knowledge of results (KR) on initial learning and the eventual lack of need for KR to successfully perform the learned skill. During the decades of the 1970s and 1980s many experiments were reported that investigated and generally supported this hypothesis.

Researchers also reported numerous experiments to test the variability of practice hypothesis that was central to Schmidt's theory (1975). This theory, known as the schema theory, proposed that the control of motor skills should be viewed in terms of the control of "classes of actions" rather than of specific movements. For example, the motor skill of walking can be viewed as a class of actions because it can be performed in different ways, on different surfaces, and at different speeds, without

changing the fundamental coordination characteristics that describe walking behavior. The theory proposed that these classes of actions are neurologically controlled by "generalized motor programs," which provide the essential fundamental coordination characteristics required to perform a class of actions. But, to perform the action in a specific situation, the generalized motor program requires specific movement features, which the theory referred to as movement "parameters," to meet the situation demands. The parameters, which include movement characteristics such as the overall movement speed, are stored in memory in the form of a "schema," which is similar to a concept or a rule. The selection of a parameter level that would be appropriate for performing a skill in a specific performance situation, such as walking speed, is dependent on the strength of the schema. This strength is determined by the amount and variety of practice and experiences with various levels of the parameter. Accordingly, the theory's variability of practice hypothesis predicts that successful performance of a motor skill in any situation is related to the variety of practice experiences associated with the parameter involved. This means that the selection of an appropriate walking speed for a specific situation would be dependent on the amount and variety of previous walking speeds experienced; more variety of experiences results in more successful performance in a new situation. The results of the numerous experiments testing this hypothesis that were reported in the research literature generally verified it.

The Adams and Schmidt theories prevailed as the theoretical bases for the study of motor learning throughout the latter quarter of the twentieth century. However, during this period of time an alternative theory was being promoted and soon rivaled the Adams and Schmidt theories for prominence as an influential force in motor learning research. The dynamical systems theory emerged primarily through the efforts of individuals such as Scott Kelso, Michael Turvey, and Peter Kugler (see Kelso 1995), although the theory initially addressed issues more related to motor control than to motor learning. This theoretical view of the control of coordinated movement grew out of evidence demonstrating that the control of coordination, especially those that are cyclical in nature, is best

demonstrated from the perspective of complex biological systems. These systems change from one stable state to another in ways consistent with non-linear dynamics. As a result, researchers reported evidence that the control of coordinated movement follows physical and mathematical laws consistent with other complex systems in nature. Notably, research by scholars such as Pier Zanone and Scott Kelso (1994) established that this theory could also be applied to motor skill acquisition.

Although researchers have proposed other motor learning theories, Schmidt's schema theory and the dynamical systems theory have emerged as the predominant influences on research testing motor learning theory hypotheses. Interest in Adams's theory waned dramatically in the latter years of the last century, undoubtedly due to its restricted application to slow, self-paced, discrete movements.

Other influences on present-day motor learning research can be attributed to the behavioral study of motor control. For example, observational learning received a major impetus as a result of an increase in research concerning the role of vision in the control of motor skill. Similarly, research that has investigated issues related to the transfer of learning and part-whole practice has been influenced by motor control research concerned with coordination dynamics.

Finally, the influence of cognitive psychology continues to influence motor learning research interests. This influence can be seen in an examination of three currently popular areas of study—the contextual interference effect, implicit learning, and the focus of attention. Contextual interference refers to the interference that results from the practice of various skills within the context of practice. In motor learning research, the study of contextual interference has involved the investigation of the effect on the learning of multiple skills of various practice schedules that represent different amounts of contextual interference. The “contextual interference effect,” is the learning benefit that results from practicing multiple skills in situations involving high amounts of contextual interference (e.g., a practice schedule that involves practicing the skills in a random order in every practice session) compared to practicing those skills in situations involving low amounts of contextual interference (e.g., a practice schedule that involves

practicing each skill in its own block of trials). The study of the influence of contextual interference on learning had its beginnings in cognitive psychology with the work of William Battig (1979), with the initial application of the effect to motor-skill learning by John Shea and Robin Morgan (1979). Since that time many researchers have undertaken the study of this effect by addressing questions concerning the generalizability and causes of the effect.

The study of implicit learning has its roots in the study of the learning of grammar by Arthur Reber (1967). Research concerning its application to the learning of motor skills has included the learning of complex pursuit-tracking tasks and sequential movements, such as those involved in a serial reaction time (SRT) task. Richard Pew (1974) reported evidence of the implicit learning of motor skill in a report concerning the learning of a pursuit-tracking task that consisted of random and repeated components. Participants improved on both types of components, more on the repeated than the random, and reported no awareness of the repeated portion. However, Pew made no reference to “implicit” learning in that study. Several years later, Richard Magill (1998) reported the replication of Pew's findings and presented a discussion of them in the context of implicit learning as it relates to motor skills. Similar types of effects have been found for SRT tasks, beginning with research first reported for amnesic patients. In these experiments, in which they made the distinction between the learning of “procedural knowledge” (the actual movement “procedures” required to perform a skill) and “declarative knowledge” (the verbal description of what should be done to perform a skill), results showed that people could acquire substantial procedural knowledge of a perceptual-motor sequence in the absence of explicit declarative knowledge. Since that time, researchers have directed efforts toward determining the degree of perceptual versus motor knowledge implicitly and explicitly acquired in SRT tasks. In addition to researchers engaging in empirical investigations of implicit and explicit learning of motor skills, some have incorporated implicit and explicit learning into their theories of motor learning, such as those of A. M. Gentile (2000) and Daniel Willingham (1998).

Research concerning the focus of attention during the learning of motor skills assesses a prediction of the action-effect hypothesis proposed by the German scholar Wolfgang Prinz (see Wulf and Prinz 2001). The hypothesis predicts that actions are best planned and controlled by their intended effects, which means that the learning of motor skills is optimized when the learner's attention is directed to the intended outcome of the skill performance (the action effect) rather than on the movements used to perform the skill. For example, when learning to hit a golf ball, it is better to focus attention on the club head's pathway during the swing rather than on the movements of the arms and legs. This research has developed primarily through the efforts of Gabrielle Wulf and her colleagues and has generated strong support for the hypothesis for a wide range of motor skills (Wulf and Prinz 2001).

PROFESSIONALS WHO APPLY MOTOR LEARNING PRINCIPLES AND CONCEPTS

It would not be possible to develop an exhaustive list of professionals who apply to their practices the theories, principles, and concepts that have grown out of the motor learning research described above. However, to provide a general sense of the practical benefit derived from motor learning research, the following list presents many of the professions that utilize motor learning knowledge in everyday practices.

- Athletic trainers
- Dance teachers
- Fitness instructors (including the instruction of aerobic dance, spinning, Pilates, etc.)
- Music teachers (especially those teaching voice and instruments)
- Occupational therapists
- Physical education teachers
- Physical therapists (also known as physiotherapists)
- Preschool teachers
- Recreation therapists
- Speech therapists
- Sports coaches

Richard A. Magill

PHYSICAL EDUCATION IN THE TWENTY-FIRST CENTURY

The field of physical education has changed dramatically in the past forty years. While once a comprehensive name to describe all aspects of the field interested in human movement and physical activity, today physical education is a narrower term that reflects a vibrant field focused on teaching, curriculum, and teacher education in movement-related areas. In this entry, we address first the historical underpinnings of the field. The next segment focuses on current perspectives and issues, and the final segment summarizes the entry.

HISTORICAL UNDERPINNINGS

As noted above, the field of physical education has changed dramatically in the past forty years. The 1960s and 1970s saw tremendous changes in the field. In the 1960s, all college and university physical education departments were focused on the training of teachers. All undergraduates were enrolled in departments of physical education to teach physical education—primarily in kindergarten to twelfth grade. While some professors in university departments mostly taught, a few conducted research. School physical education programs were directed toward motor skill acquisition and physical fitness with little emphasis on developing good attitudes and lifetime participation in physical activity. Changes in both university departments and kindergarten to twelfth grade schools began in the 1960s and continue today.

The initial changes in physical education departments in colleges and universities often are attributed to the ideas set forth in an article by Franklin Henry in 1964. In that article, Henry argued that, if the field were to survive, university professors would have to engage in research in order to expand knowledge. At the time many, if not most, university faculty members were generalists. Faculty members and graduate students became specialists and the field changed to one in which there are a number of subdisciplines, including exercise physiology, motor learning, motor control, motor development, sociology of sport and physical activity, sport and exercise psychology, and

pedagogy. At the same time, academic departments were changing their names to reflect their new missions and today many departments have names such as kinesiology, movement science, exercise science, and human performance. Most of these departments include the training of teachers as part of a larger emphasis on the study of movement and physical activity. Those who become physical education teachers learn about the subdisciplines and, along with pedagogical knowledge and skill, use this information to be effective physical educators.

As commented on by Stephen Silverman and Catherine Ennis in their book *Student Learning in Physical Education: Applying Research to Enhance Instruction* (2003), the subdiscipline that focuses on teaching, curriculum, and teacher education now is often referred to as “sport pedagogy.” This area represents both research on teaching, curriculum, and teacher education in physical education, and the practice of teaching, teacher training, and curriculum development. In both research and practice there have been many changes over the past decades. Amelia Lee, in “How the Field Evolved,” characterized the changes that are summarized in the next few paragraphs (Lee 2003).

Physical education teaching, curriculum, and teacher education were not research-based fields when the field began to change. There was very little research and very few faculty members pursuing research agendas. In the mid-1970s Lawrence Locke in an important essay, “Research on Teaching Physical Education: New Hope for a Dismal Science,” suggested that the field had made some gains, but had a long way to go (1977). In the intervening thirty years, a great deal of focused research has been conducted and there are many researchers who helped advance our knowledge and informed the work physical education teachers do. For example, we know a great deal about the factors that impact student motor skill learning. We now know that when students are highly engaged and their practice is successful they tend to develop motor skills; that the development of a positive attitude toward physical education and motivation greatly influences a student’s participation in physical activity (physical education plays an important role in the development of attitude and motivation—unfortunately, not always in a positive direction); and that teachers’ values, beliefs, and other contextual factors influence what is taught

and learned in physical education. Research has resulted in a large knowledge base that both extends our understanding of school physical education and provides information for implementing more effective physical education programs.

While university departments of physical education were changing, so were kindergarten to twelfth grade physical education programs. Most physical education programs once focused solely on learning skills to play sports and games. Today, however, many physical education programs are directed toward learning skills, knowledge, and attitudes that will help students to lead a physically active lifestyle and become a responsible member of society. Physical education programs have changed dramatically in many communities. The uniforms and straight lines of the past have now been replaced by student-centered teaching methods, curricula that develop confidence and respect for others, and a focus on activities that students enjoy and are likely to continue outside of physical education class. Sadly, not all schools have changed curricula and teaching methods, but those that have a focus on different goals than in the past will likely have students leave those classes with better skills, knowledge, and attitudes for a lifetime of physical activity.

CURRENT PERSPECTIVE AND ISSUES

The changes in the field of physical education have resulted in many new practices in schools. At times, outside factors, such as a focus on school accountability, have impacted the field as much as internal factors have. School and community context, as portrayed in LeaAnn Tyson Martin’s work “Context, of Schools,” strongly influence what goes on in physical education—as it does other school subjects (Martin 2003). Of the many current issues or themes in physical education, the following are among the more important: (1) standards-based curriculum development in physical education; (2) current curricular approaches in physical education; and (3) a focus on student development.

Standards-Based Curriculum Development In Physical Education

In virtually every area of school practice, standards have been developed to guide what is taught and

assessed in the subject matter. In physical education, national standards were released in 1995 by the National Association for Sport and Physical Education, the main professional organization for physical educators and a component of the American Alliance for Health, Physical Education, Recreation and Dance. These standards focus on all areas of content development. The seven standards suggest that a physically educated person: (1) is competent in a number of movement forms and is proficient in a small number; (2) can use the knowledge about movement; (3) has a physically active lifestyle; (4) is physically fit; (5) exhibits responsible personal and social behavior while participating in physical activity; (6) understands differences and shows respect for others; and (7) understands how physical activity can enhance their life. These standards, developed by physical educators, are ambitious but a school physical education program that is aligned across grade levels and focused on reaching them can greatly influence the lives of children.

The national content standards in physical education have influenced the development of many state standards for physical education. An analysis of any state's content standards for physical education likely will show goals related to motor skill development, knowledge and attitude development, responsibility and respect for others, physical fitness, and, perhaps most importantly, the promotion of a physically active lifestyle. If children learn skills in physical education but then do not participate in physical activity after they leave high school, the physical education program has not helped those children be physically active and derive the benefits from a physically active lifestyle.

Content standards are often used to measure accountability. In order to do that teachers and administrators must measure whether students have met the standards at various points during their education. In most states, each school district develops its own plans to measure whether students have reached the content standards. In a few states, most notably South Carolina and New York, statewide assessment programs are being developed for public school physical education. Statewide assessment has the potential to provide a broad picture of whether and how students are mastering content standards.

Current Curricular Approaches In Physical Education

Although some schools are still employing the content and teaching methods of the past, many physical education programs are designed in ways and have an emphasis that is more contemporary. The perspective on curriculum and teaching has changed to reflect different goals and an understanding that student development goes beyond skill development and participation in sport. This section highlights: (1) curricular approaches in elementary schools; (2) integrating physical education with other subject matters; (3) contemporary approaches to teaching sport; (4) health-related physical education; and (5) teaching social and personal responsibility in physical education.

Curriculum in elementary school physical education is less focused on sports and games than in the past and more focused on learning skill that is transferable to a number of activities. Many physical educators believe that teaching and participating in specific sports early in the school experience results in many students engaging in sports and games before they have the needed skill to be successful. If students are unsuccessful they may develop negative attitudes about their abilities and this may influence their future participation in physical activity. One approach used by many physical educators is the skill theme approach that was suggested by prominent educators George Graham, Shirley Holt/Hale, and Melissa Parker (2004). In this approach, students gradually learn skills and apply them in different situations and contexts. Students develop skills and learn movement concepts, in ways that are developmentally appropriate.

In many elementary and secondary schools, physical education content is being integrated with other content matter. This occurs in a number of ways. For example, physical education and social studies teachers may integrate a unit on Native Americans where students in physical education learn about physical activity and games that were a part of Native American life in their area of the country. Or a science teacher might work with the physical education teacher to integrate curriculum about the effects of physical activity on the body in ways that are complementary and thus help students learn both science and physical education concepts. The

effective use of integrated curriculum is far more complicated than these simple examples. Judith Placek (2003) in "Interdisciplinary Curriculum in Physical Education: Possibilities and Problems," and Theresa Cone, Peter Werner, Stephen Cone, and Amelia Woods in their book *Interdisciplinary Teaching Through Physical Education* (1998) have provided professionals in the field with excellent overviews of the issues and development of integrated curriculum.

The teaching of sport was once the major—some would say sole—focus of physical education. Students entered physical education class and learned skills and mostly played team sports. Sport still is an important focus of physical education, but how sport is taught and what is learned has changed. In an ideal setting, students will have learned basic motor skills that are relevant to sport participation prior to learning specific sports. Students who have basic movement skills can then learn how to modify and apply them to specific sports, while learning other aspects of sport participation.

A number of contemporary approaches now are being employed to teach sport to children. These approaches go by different names (e.g., teaching games for understanding, tactical-games approach, and sport education) and there are differences among the approaches. While to some the differences may be large, the biggest difference is with the traditional way many of us learned sport in physical education. In these approaches, students do not practice isolated drills and then participate in games. Students in contemporary approaches learn tactics and strategies while learning skill, they understand a variety of aspects of the sport, and participate in the sport in various capacities. Units are typically much longer than two or three weeks and this increase in time permits opportunity for more authentic learning. These approaches are a radical change from the past, but for many students a welcomed change from units that focused on game play with little actual learning.

As noted earlier, two of the national content standards for physical education focus on becoming physically fit and maintaining a physically active lifestyle. There have been many approaches to teaching health-related physical activity so that children will have the knowledge and skills to become fit, participate in physical activity, and enjoy it so they continue to

participate after graduating from high school. Thomas McKenzie has been recognized as a leader in developing and evaluating curricula in this area (2003). One such curriculum, Sport, Play, and Active Recreation for Kids (SPARK), addresses many aspects of health-related physical activity—in physical education, in classrooms, and in the community and home (SPARK 2004).

The focus on a physically active lifestyle has been addressed in many reports and, most notably in the 1996 Surgeon General's report on physical activity and health, *Physical Activity and Health*, and in *Healthy People 2010* (U.S. Dept. of Health and Human Services 2000). Since physical activity has an impact on health, the role of physical education in promoting physical activity cannot be overstated. Physical education programs that promote physical activity have the potential to influence students throughout their life. Physical education programs that create poor attitudes toward physical activity—even if they help students get fit—unfortunately will also have a lasting influence. The recent focus on being physically active throughout life requires teachers to design or utilize curriculum and teaching methods that do not turn children off to future participation.

Another one of the national content standards for physical education focuses on personal and social responsibility. Don Hellison, scholar and educator, has been a leader in using physical activity to promote personal and social responsibility. His framework, as described in his book *Teaching Responsibility Through Physical Activity* (2003), has been implemented and adapted in thousands of schools across the country. The general approach is to use physical education to help students develop into productive adults. Games and physical activity, valued by many children, provide a venue for helping children develop as personally and socially responsible individuals. Hellison's model and framework utilizes physical activity to guide students to become caring adults. This goal is important and physical education teachers have a unique medium to help students achieve it.

While each of these curricula can be and have been used independently, aspects of each can be combined to address a number of goals in physical education. In some situations, teachers have a specific focus (e.g., personal and social responsibility) and concentrate

on that. In other situations, it may be beneficial for teachers to combine aspects of various approaches to create a context specific curriculum to meet the goals they would like to achieve.

Focus On Student Development

As can be seen from the curricula discussed above, development of the individual child is an important focus in physical education. In many respects the development of attitude and motivation are as important as the development of skill. In many communities, high school curricula are being changed so students can enjoy participation in activity that will carry over to making choices to engage in activity in the future. Teaching for skill mastery or fitness without concern for an individual student's attitude and motivation will only reach limited goals. For example, a high school physical education program that focuses on group fitness activities (e.g., aerobics classes) may not help those students who are more inclined to participate in physical activity in other ways (e.g., walking, running, or bicycling). Teachers who provide programs that negotiate the difficulties of helping students to learn and experience success in activities they enjoy are more likely to have a greater influence on whether the student maintains a physically active lifestyle.

THE NEW PHYSICAL EDUCATOR

Physical education has changed from one focused on skill development, sport, and fitness to a subject matter that promotes many goals. Physical educators today want students to learn skill and feel efficacious about participating in physical activity; to become fit, but in ways that promote good attitudes and promote an active lifestyle; to have the knowledge and skills to participate in physical activity; and to display responsible behavior in physical activity and other settings. To accomplish this, teachers are employing curricular approaches and teaching and assessment methods that help them reach these goals.

The field has grown and has been informed by a substantial research base and by innovations for practice. The future of physical education requires differing approaches from those used in the past. The

development of a physically active lifestyle is a personal decision for each student—and requires a physical educator to help each participate in learning experiences that promote good decisions.

Stephen Silverman and Kristin Scrabis

ADAPTED PHYSICAL EDUCATION

The past century has witnessed a major shift in the way society views people with disabilities. Rather than being considered a burden to society, people with disabilities are now considered individuals who possess a different set of abilities than the majority of the population. Our current perspective is that people with disabilities have unique skills and abilities that need nurturing. Physical education and/or physical activity enable individuals with disabilities to engage in activities that contribute a sense of well being.

HISTORICAL UNDERPINNINGS

Prior to the 1900s physical education programs had a distinct medical orientation. Many of the early leaders were physicians. Two pioneer physicians who promoted physical education and especially its role in serving persons with special needs were Dio Lewis and Dudley Sargent. In 1860, Dr. Dio Lewis introduced a system of gymnastics in Boston. Lewis was interested in the weak and feeble persons in society. He aimed at developing agility, grace of movement, flexibility, and improving general health and posture. Dudley Sargent earned his M.D. at Yale in 1878 and then opened a private gymnasium in New York City called the Hygiene Institute and School of Physical Culture. In 1879, Sargent became Director of the Gymnasium and Assistant Professor of Physical Training at Harvard. Sargent's work targeted those students most needing physical training and offered individualized exercise programs (Gerber 1971).

Organized physical education programs as part of the school curriculum in larger urban areas such as Boston and St. Louis began to appear early in the 1850s. In 1885, in Brooklyn, Edward Hitchcock organized the American Association of the Advancement of Physical Education. Physical education

programs during this period largely consisted of gymnastics that had been developed in Sweden, Germany, and Denmark. Advocates of each system did their best to spread their particular program and attempted to have their program incorporated as part of the school system. The Swedish system had more popularity in the East and the German system was more prevalent in the Midwest. The early 1900s were characterized by a transition to a sports-oriented physical education. The period between the world wars and into the 1950s resulted in an increase in the importance of physical fitness in school physical education. Thus, by the early 1950s the medical focus, the sports emphasis, and the fitness movement had created a broad definition of physical education with an array of activities.

The term "corrective" or "remedial physical education" was commonly used in the 1930s–1960s to describe restricted or modified activities related to health, posture, and fitness problems. During this time period wheelchairs became a prominent feature in rehabilitation programs for war veterans. Sir Ludwig Guttmann established Europe's first organized wheelchair sports program in 1948 at the Stoke-Mandeville Spinal Cord Injury Center in Britain. Timothy Nugent pioneered wheelchair sports in the United States at the University of Illinois with wheelchair basketball. The American Association for Health, Physical Education and Recreation defined the field of adapted physical education in 1952 with the following statement by the Committee on Adapted Physical Education:

Adapted physical education is a diversified program of developmental activities, games, sports and rhythms suited to the interests, capacities and limitations of students with disabilities who may not safely or successfully engage in unrestricted participation in the vigorous activities of the general physical education program. (Committee on Adapted Physical Education 1952)

Two related professional fields are kinesiotherapy and therapeutic recreation. Both professions provide services for individuals with disabilities but generally focus on adult programs whereas adapted physical education programs are based in public schools.

Kinesiotherapy was formerly named corrective therapy and is considered an allied health profes-

sion. This profession began during World War II and initially provided physical reconditioning for injured soldiers. A kinesiotherapist administers therapeutic exercise or activity based on a treatment plan. Therapeutic exercise can consist of a variety of strengthening, endurance, and flexibility prescriptions.

Recreational therapists are health care providers using recreational therapy interventions for improved functioning of individuals with illnesses or disabling conditions. The primary purpose is to provide recreation resources and opportunities to improve health and well being. The American Therapeutic Recreation Association was formed in 1984 and there were approximately 38,000 recreational therapists in 1996 according to the U.S. Department of Labor, Bureau of Labor Statistics (Muns 1998). The recreation therapist conducts assessments to determine an individualized treatment plan, develops goals and objectives for the plan, implements the recreational plan, evaluates the effectiveness of the treatment plan, and develops a discharge plan in collaboration with the patient/client.

CURRENT PERSPECTIVES AND ISSUES

Adapted physical education (APE) teachers teach children with disabilities who have a variety of physical and mental skill levels in the public schools of the United States. The specific professional practices of adapted physical educators have been shaped by special education policies that have always included a multidisciplinary approach to providing educational services. Understanding the specific needs of each child requires that the APE teacher consult with other professionals such as physical and occupational therapists, speech and language pathologists, school nurses, and classroom teachers.

Adapted physical education is defined by federal legislation that has affirmed the rights of students with disabilities to a free and appropriate public education. Each of these legislative actions has resulted in greater access and participation of individuals with disabilities in physical education programs. Access to programs and facilities was provided by section 504 of the Rehabilitation Act of 1973 (P.L. 93–112). The most significant federal legislation that mandated free and appropriate education for children with disabilities was P.L. 94–142, the Education of All Handi-

capped Children Act of 1975. This law specifically stated that physical education was to be an integral part of the educational program of the individual with a disability. Essentially this law ensured that the adapted physical education profession would become a viable member of the special education professional delivery system.

The federal legislation identified the Individual Education Program (IEP) as the cornerstone of special education. The IEP is a statement that must be prepared for any child with a disability and is jointly prepared by all persons directly concerned with the education of the child, including parents. The concept of the "least restrictive environment" presented in the legislation required that children with disabilities be educated with typically developing children. Special classes and separate schooling may still be used as alternatives but only when the severity of the disability and the need for specialized support services warrants this separation. In the late 1980s and early 1990s the term "inclusion" was used by parents and educators who wanted a stronger focus on the implementation of the least restrictive environment with students in general education classes and attending their neighborhood school. In this perspective, inclusion must be more than a placement or a specific program, it is an attitudinal and teaching philosophy that provides all students with appropriate educational programs geared to their abilities and needs with the support and assistance to achieve success.

In 1986, Congress passed the Education for all Handicapped Children Amendment of 1986 (P.L. 99-457). This law focused on early intervention services for individuals with special needs from birth to two years of age, and expanded services for three-to-five-year-olds. Preschool physical education programs were expanded in response to this legislation. In 1990, Congress passed P.L. 101-476, the Individuals with Disabilities Education Act, and combined previous legislation into comprehensive legislation directing the delivery of special education services. The preferred term "individuals with disabilities" was used to indicate professional concerns about the word "handicapped," with its focus on deficits rather than abilities. This law has been reauthorized most recently in 1997 and provides the guiding principles for the national delivery system for adapted physical education in schools throughout the country. There is no

doubt that from the 1970s to the present, federal laws have contributed to the development of programs of adapted physical education. In this context, the adapted physical educator delivers services through consulting and acts as a resource to other teachers, in addition to providing direct physical education services.

Since the 1970s, the number of individuals with disabilities participating in competitive sports has increased. The Amateur Sports Act of 1978 (P.L. 95-606) charged the United States Olympic Committee with encouraging provisions for sporting opportunities for individuals with disabilities in athletic competition. This effort helped create the Committee on Sports for the Disabled in 1983. Participation in national and international competitions continues to rise in events such as the World Games for the Deaf, World Wheelchair Games, and Special Olympics. In 1968, Eunice Kennedy Shriver founded Special Olympics and hosted the first International Special Olympic Games at Soldier Field, Chicago. Special Olympics was created through the Joseph P. Kennedy Jr. Foundation for the benefit of individuals with mental retardation.

The concept of full inclusion was originally viewed in the context of an educational placement, such as in a general education classroom. However, the term *inclusion* has developed a broader interpretation since the 1980s. Various initiatives now support the concept of empowerment of individuals with disabilities to adopt a physically active lifestyle. For example, the Centers for Disease Control and Prevention sponsors a program on promoting the health and wellness of women with disabilities. Other national and international organizations such as the World Health Organization's Active Living Program and the Paralympic Games focus on the importance of physical activity for all.

Healthy People 2010 identified specific health issues warranting special attention for people with disabilities (U.S. Department of Health and Human Services 2000). This report recommends specific interventions to improve the health and wellness of people with disabilities to prevent the development of secondary conditions. For example, a person with limited mobility has a high risk of developing secondary conditions such as low back pain as a direct consequence of the initial disability. In an effort to support the research and development of interventions that promote the health and wellness of per-

sons with disabilities, the National Center for Chronic Disease Prevention and Health Promotion provided funding opportunities in this area in 2003.

Despite an emphasis on inclusion, our society tends to impose labels on individuals who are perceived to be mentally, emotionally, and socially different. Historically individuals with a disability have been classified, categorized, and provided with programs based on a disability. The challenge for all teachers is to plan educational programs based on the individual and the performance of that individual in the learning environment. Although initiatives and federal laws can support inclusion and opportunity, it is at the grass roots level that individuals with disabilities are supported and educated.

One challenge facing adapted physical education is the professional relationship between the general physical education teacher and the adapted physical education specialist. In a collaborative model, the two teachers should be equal partners in developing the instructional program for children with disabilities. However, in some cases the general physical education teacher may believe the specialist should be responsible for instructional decisions for children with disabilities. How well these two professionals work together can be a key factor in creating an effective learning environment for all students including those with and without disabilities.

The second major challenge concerns accountability. Physical education programs are often viewed as not needing an assessment program that focuses on student performance. In some cases, individual states have not defined grade level performance standards or benchmarks. The goals and objectives of physical education programs may not be consistent and in the current educational climate that emphasizes student performance in the core curriculum, physical education programs may often not be valued as highly as other subject areas. Consequently, the APE teacher needs to serve as an advocate for physical education programs for children and youth with disabilities.

MOTOR TEACHERS AND FACILITATORS

Adapted Physical Education (APE) teachers teach toddlers, children, and youth with all types of disabilities including those with severe disabilities. They are skilled in examining results of medical, psychologi-

cal, sociological, and educational assessment and planning, teaching, and evaluating appropriate physical education programs. APE teachers are proficient in identifying what kinds of physical activities are appropriate for each disabling condition. Safety is a priority in planning activities. For example, a child with Down Syndrome should be checked for atlantoaxial instability before engaging in sports and games that involve rapid movements of the neck.

APE teachers have personal qualities that enable them to provide physical activity programs for those with the most severe disabilities. They are patient with students who learn at a slower pace. Many teachers are creative and develop pieces of equipment for the unique needs of children. With the trend toward inclusion, APE teachers use professional skills of consultation and collaboration to assist other teachers and parents in developing appropriate physical education programs. In particular, the APE teacher works closely with the general physical education and classroom teachers to ensure students with disabilities are well served.

According to the most recent report from the U.S. Department of Education, Office of Special Education Programs, a total of 5,432 adapted physical education teachers were utilized in the United States in the 1999–2000 school year. These teachers provided special education services for children and youth with disabilities, ages three to twenty-one. The greatest portion of these teachers (1,058) were employed in New York State with the second-largest number of 811 being hired in California (U.S. Department of Education 2001).

This data may be influenced by how states determine who is qualified to teach students with disabilities. Individual states determine appropriate qualifications for adapted physical educators. Currently thirteen states (AK, AL, CA, FL, IN, KS, LA, MI, MN, MS, ND, OH, WI) have an endorsement and/or certification requirement in adapted physical education that is required for employment. In other states, failure to define who is qualified has given schools the option of deciding if these services will actually be provided and who will provide them.

In California, adapted physical education is a designated instruction and service. This is established under California Education Code (Section 56363). California's special education delivery system and funding model is categorical in nature and based on the specialized instruction and intensity of services needed by each indi-

vidual pupil. The range of instruction consists of special day classes, resource specialist programs, designated instruction and services (including adapted physical education) and nonpublic school units.

The knowledge base used by adapted physical educators is cross disciplinary, encompassing the areas of sports medicine, physical education pedagogy, motor learning and development, exercise science, special education, psychology, behavior management, and lifespan human growth and development. A wide range of physical activities such as sports, dance, aquatics, physical fitness items, and leisure pursuits are used to accomplish specific objectives for a person with a disability. Adapted physical education programs at universities are housed in kinesiology or physical education departments and adapted physical education is a concentration and/or emphasis area in a kinesiology or physical education degree program.

Many universities offer concentrations in adapted physical education at the undergraduate or graduate level, and many have a strong tradition in adapted physical education. One characteristic of many of these university programs is that they offer physical education, sport, and recreation clinics for children and youth in their local communities and this provides a clinical training ground for prospective adapted physical educators.

The field of physical education has been historically associated with competitive sports and games. Although the emphasis on lifetime physical activity is emerging as the most significant outcome of a physical education program, competition is still a prominent feature. Given this backdrop, the APE teacher has to constantly support the inclusion of children with disabilities into a sport environment in which they may not fare well in comparison to peers. In an effort to support participation of children with disabilities the APE teacher often focuses on disability awareness activities, developing social skills, and helping address the stereotypical attitude that children with disabilities have nothing to contribute.

The profession of adapted physical education is supported by the journal *Adapted Physical Activity Quarterly* (APAQ). This journal has been published since 1984 and includes a strong emphasis on original research. In a review of the scientific subject areas that were included as APAQ articles in 1984–2000 the following topics were the most commonly covered: assessment/classification, pedagogy/program-

ming, physiology/physical activity, sport psychology, and motor learning/control. APAQ is the official journal of the International Federation of Adapted Physical Activity and is extensively used by university programs preparing individuals to enter the profession of adapted physical education. Two additional journals, *Palaestra* and *Sports 'n Spokes*, are used by APE professionals.

The profession has also benefited from the Adapted Physical Education National Standards (APENS) project that is designed to ensure that physical education instruction for students with disabilities is provided by qualified physical education instructors. Sponsored by the National Consortium for Physical Education and Recreation for Individuals with Disabilities (NCPERID), APENS provides professional certification. The APENS exam consists of one hundred multiple choice items designed to measure knowledge of human development, motor behavior, exercise science, measurement and evaluation, history and philosophy, unique attributes of learners, curriculum theory and development, assessment, instructional design and planning, teaching, consultation and staff development, student and program evaluation, continuing education, ethics, and communication. The first exam was taken by 224 teachers in 1997. Teachers passing the exam are certified for seven years and can officially use the acronym CAPE after their names to designate their professional status.

As related by authors A. W. Burton and D. E. Miller in *Movement Skill Assessment* in 1998, the profession of adapted physical education has greatly contributed to the body of knowledge in assessment of movement skills. The assessment of physical skills has roots dating back to the work of neurologists and physicians in the developing field of physical education in the latter part of the nineteenth century. A landmark publication in 1927 was the book *Measuring Motor Ability: A Scale of Motor Ability Tests* (Brace). Using this scale, a single summary score reflected a person's performance on twenty physical activities. The emergence of the professions of occupational and physical therapy has created a variety of assessment instruments developed to assess daily living skills and motor capabilities. With the passage of the Education of All Handicapped Children Act in 1975, assessment tools were developed to enable the professional to measure all as-

pects of motor performance. Many of the currently used tests were initially developed well before 1975. The Bruininks-Oseretsky Test of Motor Proficiency was created in 1978 from the Oseretsky Tests of Motor Proficiency developed in 1946 (Bruininks 1978). The Denver Developmental Screening Test (DDST) was first presented by W. K. Frankenburg and J. B. Dodds in 1967, and published in 1969. It was revised in 1975 and 1990. The DDST examines development in gross motor, language, fine motor-adaptive, and personal-social areas for children from birth to six years.

Most recently, a National Center on Physical Activity and Disability website (www.ncpad.org), presented by the Department of Disability and Human Development at the University of Illinois at Chicago, has been created to support the work of adapted physical educators. Concerned with physical activity and disability, it provides information on a vast array of topics to support and encourage physical activity participation. Examples include resource directories, fact sheets, monographs, calendars of meetings, media coverage, discussion groups, online media presentations and a monthly newsletter. This website has provided essential support to individuals with disabilities who are seeking a physically active lifestyle.

The professionalization of the field of adapted physical education has been evolving steadily in the last three decades. However, the field will need to respond to the following challenges. A primary challenge is to maintain quality physical education programs in public schools that effectively include children with disabilities. This will require that all physical educators have the necessary skills and abilities to implement developmentally appropriate programs. The second challenge is to maintain the progress that has been made in providing access for individuals with disabilities to facilities and programs in schools and communities. If individuals with disabilities are to gain the benefits of a physically active lifestyle, greater support from society at all levels is necessary. Individuals with disabilities often experience poorer health, shorter lifespans, and less access to professional health care. Providing more physical activity and recreation programs in community settings would serve the health needs and contribute to the well being of these individuals.

Christopher Hopper

MOVEMENT SCIENCE

The term "movement science" has been used to characterize emerging and successful efforts to establish an interdisciplinary focus for the study of movement and to recognize the impact of cognitive sciences in that study. Throughout the late 1970s and early 1980s discussions about the difficulty for individuals with different perspectives of movement to communicate across domains led to efforts to design crosscutting research that viewed the moving individual more holistically. Thus, performance outcomes could be aligned with biomechanical analysis of changes in movement and arousal levels monitored to determine impact of and effects on performance and learning. The moving individual learner/performer was viewed as a complex system and all elements affecting the effectiveness of that system had value for simultaneous study. It was further recognized that the study of movement must include assessment of the environment, task difficulty, and performer expertise.

The trend toward defining movement sciences as the coordinated interaction of various systems is obvious in the program descriptions of departments of movement sciences. Several programs (for example, that at the University of Michigan) define movement science as the study of the causes and consequences of human movement including behavioral, biological, and mechanical factors. Others define topics and the types of questions addressed by faculty and students. For example, such topics include: how individuals initially acquire motor skills; what changes take place over time with practice in varying types of environments; how movement and coordination develop in children and in young and older adults; and how the acquisition and development of motor skills occur with disabled and diseased individuals (University of Texas at Austin).

PERSPECTIVES AND RESEARCH

Several research programs were developed in the 1970s and 1980s that focused on exploring motor performance through simultaneous measurement of multiple systems. One of the earliest efforts used a head-mounted camera to film the visual environment as seen by a hockey goalie during a scrimmage (Bard

and Fleury 1976). A complex device enabled the researchers to determine where the player was looking. The most successful players looked at open space. They found similar results in a series of still photos shown to novice and expert basketball players; the greater the expertise, the more likely that vision was directed at open spaces. Also in 1972, Joseph Higgins and Ree Spaeth had subjects throw darts at a target moving at several speeds with the view of the target constrained (Higgins and Spaeth 1972). They filmed their performances and analyzed movement as related to consistency and accuracy of outcomes. More recently, evidence can be shown for the use of biomechanical measures, visual measures, and physiological measures along with performance outcomes. The first three of the following subparagraphs present a sampling of these studies. In a fourth, some tools that might be useful for future research are reviewed.

Biomechanics and Performance

Paul Treffner et al. (2002) took multiple measures of postural stability, perceptual sensitivity, and stability of driving performance and determined that increased postural stability improves driver attention and road safety. Olivier Ouiller et al. (2002) measured performance of a tracking task, postural coordination in the hip and ankle joints, and head movement using stationary and moving targets in a moving room. Coordination modes adopted by subjects depended on the frequency of motion of the moving room. Hip-ankle coordination was similar for both tasks. B. Vereijken et al. (1997) inferred changes in coordinative structures in a complex skill using a 3-D electronic camera system that yielded apparatus dynamics, apparatus-participant dynamics, and participant dynamics. Delphine Delay et al. (1997) examined force and accuracy in golf putting to distances of one, two, three, and four meters. Club movements were recorded using a SELSPOT motion analysis system to accurately track wrist motion. As target distance increased, the downswing amplitude was increased but time remained constant.

Visual Factors and Performance

Gordon Binstead et al. (2001) recorded hand movements, reaction time, and eye movements in goal-directed aiming. They concluded that functional interactions between perception and action systems

occur during the organization and control phase. Digby Elliot et al. (1999) used muscular impulses with accuracy of performance to assess need for visual information during rapid aiming movements. They noted that the characteristics of the movement change directly with the availability of visual information.

Physiology and Performance

B. S. Lay et al. (2002) measured physiological parameters (oxygen uptake, metabolic energy expenditure, and muscle activation), as well as motor performance parameters, to determine if skilled motor performance was associated with lower energy expenditures. They found that practice reduced the metabolic energy cost of performance and practice-related refinements led to significant reductions in muscle activation.

Research Tools

Jorge Ambrosio et al. (2001) developed a process to spatially reconstruct movement using a single camera and a computerized biomechanical model. Vasilios Kyriazis (2001) invented an inexpensive telemetric system for analyzing footfall timing and speed. Although intended for use with orthopedic patients it might be adapted for movement science purposes. Jacques Temprado et al. (1997) measured intra-limb coordination of the serving arm in volleyball. Though they did not compare coordination to ball placement success, this method has promise for future use.

THE INTERFACE OF COGNITIVE SCIENCES AND MOVEMENT SCIENCES

Three lines of inquiry and theory lead to the interface of cognitive sciences and movement sciences as we experience it today. One line can be traced through E. C. Poulton (1957), George A. Miller, Eugene Galanter, and Karl H. Pribram (1960), P. M. Fitts (1964), J. A. Adams (1971), and R. A. Schmidt (1975). A second line of inquiry begins with A. Newell and H. A. Simon (1972), E. L. Lindquist (1968), and A. M. Gentile (1972). The third aspect relevant to the relationship between cognitive science and motor learning draws from the ecological psychology work of J. J. Gibson (1966, 1986), M. T. Turvey (1977) and D. G. MacKay (1987).

An early attempt to postulate and model the per-

ceived link between cognitive science and movement was Miller, Galanter, and Pribram's (1960) TOTE model. They described a Test-Operate-Test-Exit model and applied it to motor skills (pp. 81–93). The learner is provided a cognitive strategy or overall plan for skilled performance but must develop the tactics to execute the strategy successfully. Through practice, they postulated, the learner combines the tactical details into a larger motor unit using feedback to reduce the discrepancies between intended and actual performance. They suggest that:

Both skills and instincts are ongoing patterns of action, directed toward the environmental conditions that activate and guide them and organized hierarchically into action units with more than one level of complexity . . . some theoretically machinery . . . as the TOTE hierarchies envisioned here would seem to be indispensable. (p. 93)

While the TOTE model suggested that practice led to more skilled performance, Fitts (1964) postulated a three-stage model of skill learning that sought to describe novice to expert transitions. The three stages were cognitive, associative, and autonomous. In the cognitive stage the learner identifies or is helped to identify the parameters of the task. In the associative stage (invariably the longest stage) perceptual factors and movement factors are linked as a cognitive set. In the autonomous phase skilled performance becomes automated, able to be run off without significant cognitive engagement.

The preceding model theories were unique but were lacking in that they could not be tested. Adam's closed loop theory of motor learning (1971) and Schmidt's schema theory (1975) made the critical link between theory and research as they hypothesized observed behaviors predicted by their conceptions of motor learning. Schmidt incorporated principles of Adam's closed loop theory and Poulton's (1957) open loop theory to formulate his model. This model has been tested repeatedly and continuously since its initial presentation.

The second line of inquiry is based on an information processing model using a general problem-solving approach (Newell and Simon 1972), applied to learning a motor skill (Lindquist 1974), and proceeding to a more developed composite model of information processing (Keele 1968) that incorporated memory (Marteniuk 1976) and a composite

taxonomy of motor skills (Gentile 1972). The composite taxonomy of motor skills was a critical element in addressing the cognitive elements of movement as it was shown that task complexity changed as a function of the environment and the movement complexity. Spaeth-Arnold (1981, 14–30) provides a good review of motor skill taxonomies.

Newell and Simon developed an approach using protocols of learners' verbal "think aloud" comments to determine how individuals work through subgoals and discrepancies to better approximate the desired behavior. They suggest that the problem solver creates an internal representation of the problem, selects a particular method of approach, applies the method, evaluates the outcome, and tries another method or changes the representation, or abandons the problem, and finally may produce new subgoals in approaching a solution of the overall problem.

Lindquist tested their approach by using the tennis serve (1968). Applying the General Serve Problem Solver (GSPS), she noted that three properties of the tennis serve are uppermost: the horizontal and vertical position of the ball and the position of the racket face. Other properties of the serve are tested in relation to these. Her dissertation is a masterful analysis of the thought and information-processing patterns of a single subject and it demonstrates that the problem-solving, information-processing approach is applicable to the learning of a motor skill—the tennis serve.

Gentile (1972) presented a taxonomy of motor tasks intended to classify motor skills in two dimensions as a way of describing levels of task difficulty within and among categories. Spaeth-Arnold (1981) applied this taxonomy to activities for children as a way of controlling for task difficulty and information processing load. The dimensions on which the taxonomy is based are: body stability vs. body transport, secondary manipulation of objects, and nature of the environment (spatial constraints versus spatial/temporal constraints). This last classification is better known as *closed versus open skills*. Spaeth-Arnold (1981) also described the learner as an "active, problem-solving, decision-making, processor of information" (p. 32). Spaeth-Arnold (1981) postulates that skilled performance must involve perceptual, decision, and effector learning (p. 9). Perceptual learning demands recognizing and identifying aspects of the environment; decision learning requires selection of an appropriate response and analysis of its appropriateness. Finally, effector learn-

ing demands that movement be smooth, efficient, and coordinated. She also implores that learners must practice under game-like conditions and that isolated drills on fundamentals will not improve game play.

Ecological psychology seeks to impose order and regularity on perception and action (Gibson 1966, 1986). Ecological psychologists stipulate that perceiving, acting, and knowing are activities of an organism environment system and thus motor performance, for example, cannot be explained by analyzing the “mind” of the performer in a representational fashion. Turvey (Fitch and Turvey 1978) furthered their work by emphasizing direct perception via the detection of higher-order stimulus variables, as opposed to a reductionist, constructivist representational account of perception. He also challenged the laboratory experiments in movement science for their artificial approach to investigating human motor performance. The ecological approach focuses on the perception and control of events that occur naturally. William H. Warren (1995) is currently working on the visual control of locomotion and is attempting to determine how much of locomotion can be explained by using physical and environmental constraints before introducing mental principles. MacKay (1987) presented a comprehensive theory that assumed common or shared perception-action processes. A thorough discussion of his approach can be found in Denis Glencross (1993). Finally, Scott Kelso (1982), in the epilogue to his book, contrasts artifactual solutions used to explain motor behavior with the ecological perspective. His comments are true today as well. In movement science research we often use analogous devices to represent what goes on in the brain of the moving animal or human. This has serious implications for researchers and theorists trying to explain the “ghost in the machine” (Koestler 1967), and has relevance today.

Anne Rothstein

PERFORMATIVE KNOWLEDGE AND SKILLFUL PERFORMANCES

What are the concepts that surround performative knowledge? What are skillful performances? How do individuals learn or acquire a motor skill? What

does it mean when we say someone has mastered an area or activity—such as architecture, carpentry, basketball, teaching, or cooking? This entry focuses on performative knowledge and an understanding of skillful performances from a psycho-philosophical perspective and approach. Drawing information from the disciplines of philosophy, educational philosophy, and psychology, the concepts that surround performative knowledge, its critical components, and a theoretical description of skillful performance are all presented and explained. Also dealt with are the works of philosophers and educators who have employed the techniques of “analytic philosophy” to arrive at a clear understanding of the nature and scope of performative knowledge and skillful performances.

HISTORICAL PORTRAIT AND PERFORMATIVE KNOWLEDGE IN PERSPECTIVE

Twentieth-century philosophy experienced a revolution referred to as “philosophical” or “linguistic” analysis. The development of what is known as “analytic philosophy” incorporated rigorous techniques to examine central ideas, issues, and concepts. The intent of the analytic approach is to provide clarity and precision to any concept, idea, or issue. Also, it is to reveal the logical suppositions that lie beneath the structure of statements we make in the ordinary uses of language. The techniques of analytic philosophy were practiced in one form or another by such philosophers as George E. Moore, Bertrand Russell, Ludwig Wittgenstein, and Gilbert Ryle. In 1949, Gilbert Ryle, in a seminal work entitled *The Concept of Mind*, made the distinction between “knowing that” (having facts or possessing information) and “knowing how” (possessing skills and being able to perform certain acts or operations). For example, a person may know that John F. Kennedy was the president of the United States from 1961 to 1963—that is, the person is said to be in possession of a “fact” that is subject to a true or false condition. In contrast, a person who knows how to swim is said to be in possession of a “skill” that is not subject to a true or false condition but rather to having accomplished some task to a greater or lesser degree. To illustrate the distinction with another example, one person may know how to ride a bicycle while another may know the procedural operations that are involved in riding

a bicycle. The former is said to have performative knowledge while the latter has verbal knowledge. As explained by Jane Roland Martin in her work, "On the Reduction of 'Knowing That' to 'Knowing How,'" practice is one of the key elements that separate the two forms (1961).

As identified by Ryle, the constructs of "knowing that" (verbal knowledge) and "knowing how" (performative knowledge) represent distinct forms of knowledge (1949). Many educational philosophers and educators from the 1950s and through the 1970s used the distinction in their work; and many applied the techniques of philosophical analysis to uncover the nature, scope, and types of knowledge—knowing why, knowing when, and so on. Understanding the forms of knowledge and using philosophical analysis to arrive at a clearer understanding of performative knowledge has had pedagogical implications for educators and implications for researchers who study teaching and learning.

In the field of educational philosophy, particularly from the 1950s to the 1980s, philosophers and educators applied the techniques of philosophical analysis to the language and concepts of education. Precision and clarity of thinking about such central educational concepts as classroom practice, curriculum, subject matter, knowledge, teaching, and learning were envisioned as essential work for dealing intelligently and effectively with education and the educative process. Rigorous analysis leading to a clear and comprehensive understanding of any educational concept or phenomena was seen as important and most useful to achieving the desired goals of educators and researchers—be they to develop functional curriculums or to research and discern effective teaching. It was generally thought that having an in-depth understanding of the concept of interest would greatly enhance the quality of the resulting product. Thus, a thinking-through process that involved the application of such basic analytic techniques as (1) asking prior questions (for example, what is a functional curriculum or what do we mean when we say someone is an effective teacher); (2) identifying adequate criteria to be met by the concept; and (3) using ordinary examples and counterexamples to advance the concept to a level of practical testing and precision was valued and promoted by many educational philosophers and educators of the period.

Philosophical analysis applied to educational con-

cepts during the 1960s, 1970s, and the 1980s was championed by such prominent educational philosophers as Israel Scheffler, Jonas Soltis, Jane Roland Martin, B. O. Smith, Harry Broudy, Thomas Green, and Nel Noddings. All of these individuals, in their published works or portions of their writings, examined the distinct forms of knowledge that were presented by Ryle in 1949. In 1968, Jonas Soltis, in the first edition of *An Introduction to the Analysis of Educational Concepts*, applied the basic techniques of philosophical analysis to selected educational concepts including verbal and performative knowledge. In such chapters as "Types of Knowledge and Teaching," "Learning, Explaining and Understanding," and "The Disciplines and Subject Matter," Soltis provided readers with a greater understanding of the forms of knowledge and their relationship to teaching and learning. In 1978, in a second edition of the book, he further detailed the techniques of analytic philosophy and described three analytic strategies. Although Soltis focused more on "knowing that" and the teaching and learning of propositional knowledge, his coverage of "knowing how" was useful in furthering a basic understanding of performative knowledge. His work in an unpublished paper "Knowledge and Professional Practice in Education" (1974) and his collaborative work with Donna Kerr in "Locating Teacher Competency: An Action Description of Teaching," (Kerr and Soltis 1974) were both helpful in clarifying the concepts that surround knowledge and skillful performances.

Israel Scheffler of Harvard University was acknowledged as a pioneer in the field of educational philosophy and in the use of analytic techniques. In his book *Conditions of Knowledge* (1965), Scheffler provided a more sophisticated analysis of "skills," "performative knowledge," and the levels of performance referred to as "know how," "competency," and "proficiency." His work gained significant recognition among educational philosophers and subsequently influenced their writings.

As presented by Nel Noddings in *Philosophy of Education* (1995), many contemporary analytic philosophers by 1995 had taken an expanded view of the field of educational philosophy that went beyond the study of knowledge and subject matter to include analyses of a wider range of human concerns (e.g., emotions, literature, ethics, morals, justice, and equality). The emphasis by some philosophers was on

conceptual analysis and ordinary language analysis. Their work was aimed at discerning meaning, identifying conceptual errors, and setting limits on the appropriate use of the concept or term. A conceptual analysis of performative knowledge, and the usefulness, value, or utility of understanding performative knowledge is still of interest to such contemporary philosophers and educators, such as Pithamber Polsani, R. Barrett, Gareth Parry, and John Lyotard. Some believe that in many teaching and learning situations and in the study of many professions and occupations, knowledge is the content of learning, and the criterion for judging knowledge is the performance. The emphasis is placed on the action (performative) aspect of knowledge, its use-value rather than the academic truth-value sense of knowledge.

SKILLFUL PERFORMANCES

In an effort to organize and communicate the philosophical concepts and information that surround skillful performances and performative knowledge, a series of questions are identified in this segment, which is separated into concepts extrapolated from educational philosophy and concepts from psychology. The first series of questions are answered with information from the works of those philosophers who have applied the techniques of analytic philosophy to further our thinking about performative knowledge and skillful performances. The last question—How do individuals learn or acquire a motor skill?—is answered with information from psychology, more specifically from the work of an empirical researcher and specialist in motor learning, A. M. Gentile. The section following this one integrates the information from the above disciplines and fields to communicate the critical components and a theoretical description of skillful performances. The information has implications for teaching and learning, and is useful to those who facilitate the acquisition of skill and the development of skillful performers.

Concepts from Philosophy and Educational Philosophy

What are skillful performances? What do we mean when we say someone has performed skillfully? Originally, Ryle, in his 1949 book, *The Concept of Mind*, described skillful performances as “intelligent performances.” Skillful performances are critical thinking

performances. They involve the observance and application of rules or criteria associated with an activity. Ryle equated intelligent performances with skillful performances. In portraying intelligent performances, Ryle emphasized the manner in which the performance is to be conducted. He proposed a procedure that requires individuals to think what they are doing, while they are doing it and to think in such a way that they will be able to detect and correct errors as well as repeat and improve upon their successes. They must also satisfy the rules of the activity and apply criteria while performing. “Intelligence” revolves around these notions and involves these operations.

Critical thinking is an important dimension of skillful performances. To think critically in a situation, performers must first be able to perceive the important elements of the situation and then regulate their performance accordingly. They must adjust their performance to whatever the total situation dictates and perform in such a way that they are in accord with the “rules” of the activity; and in such a way that the goal they have set out to accomplish is facilitated. The element of critical thinking involves judgments and the making of decisions in changing situations where the performer is adjusting and adapting to the changes, and the performer is learning and improving upon each move or action.

In his descriptive analysis of performances, Ryle points out that skillful performances cannot be reduced to mere habits or automatic operations. Skillful performances are capacities that cannot be made automatic. They are nonroutinizable. They involve the performer’s critical judgment.

Picking up on this point in 1965, Israel Scheffler in a chapter of his book entitled, “Knowledge and Skill” examined and corrected Ryle’s notion regarding the nonroutinizability of skillful performances. Through the use of examples, counterexamples, and an examination of the different types of tasks involving skill, Scheffler corrected Ryle’s mistaken assumption that all aspects of performances are nonroutinizable. Scheffler identified aspects of performances and kinds of skills that may be routinized. He labeled them noncritical skills. Other aspects, those which Ryle referred to in 1949, are labeled as critical skills. Thus, performances involve both types or aspects of skills. This notion may be illustrated with the example of the chess player. To move pieces around the board, the chess player need not, all of the time, be mindful of how

she is moving the pieces or if she is making the moves “properly”—in accord with the rules. These moves after a period of time or initial learning become automatic. That is, in the game of chess, there is a prior set of fixed rules that govern the moves; and either a move is permissible or not. Thus, through repetition, practice, and drill, an individual can perform these moves automatically or without the type of critical thinking called for in skillful performances.

However, it was pointed out that strategy in a game like chess or in any other rule-governed professional area or activity, such as architecture, teaching, basketball, and so on, presupposes an awareness of such a propriety. There is no prior set of fixed strategic principles or rules guiding decisions. Soltis illustrated this point nicely in a paper entitled “Knowledge and Professional Practice in Education” (1974). He made analogies and comparisons between the act of teaching and playing the game of basketball. His intent was to promote a reasonable middle ground between those individuals who see teaching as art and thus somewhat indescribable, and those who view teaching more as a science thus holding to a rather mechanistic view of an individual accumulating teaching behaviors and skills. Although, there are strategies and tactics more appropriately tied to situations, which may guide a performer’s decisions (i.e., the teacher or basketball player), each new decision necessitates an innovative strategy. That is to say, the performer chooses among alternatives, judging and evaluating consequences, learning from each move what was wrong or right and, ultimately, what to do next. Thus, one would say that the performer is thinking what she is doing while doing it. That such decisions and moves cannot be made automatic is obvious. Consequently, skillful performances may include both noncritical and critical skills. The word “intelligent” as Ryle used it refers to those aspects of performances involving critical thinking skills.

With the inclusion of noncritical skills, Scheffler expanded the concept of skillful performances from that proposed by Ryle in 1949. Regarding the noncritical skills, it was suggested that in many instances they are considered “facilities.” That is, as we look at the whole performance, the noncritical skills are often the underlying techniques or the basic competences that are nested within more complex competences. Once developed and made automatic they free the performer to focus on those features of

a situation that require the exercise of judgment.

Michael Polanyi in *Personal Knowledge* (1964) discussed the noncritical aspects of skills. He referred to them as the performer’s “subsidiary awareness.” Once learned, they need not be attended to with an intense awareness or observed on a conscious level. In fact, if they are, the continuity of the performance is interrupted and the performer becomes confused. This phenomenon is sometimes seen when a person who is highly skilled in an area is asked to think about or focus on the particulars of the performance, rather than on the whole situation and the goal to be achieved. Or it is seen when individuals become self-conscious about what they are saying and begin to focus on the next word rather than communicating the idea. In both cases the performance is disjointed and the performer confused. Performers who have acquired a high level of skill within an area or activity have learned to shift the focus of their attention to the whole situation, the effects of their acts, and the goal they strive to achieve. The noncritical skills are the tools that are used to achieve goals. A good example of this is the novice driver of a standard-shift car who, at first, is focused on attending to the motor operations involved in shifting gears and operating the gas pedal, clutch, and brake while steering the car. After practice, these motor operations become relatively automatic and the driver is then able to focus attention on the events occurring on the road. The motor operations have become the driver’s tools or noncritical skills.

With regard to the development of critical thinking skills, especially those involving strategic judgment, it is suggested that performers place themselves in a variety of situations and different contexts where they have opportunities to make decisions, make judgments about their decisions, evaluate the outcomes of their choices, and reflect upon alternative choices.

From the past work of educational philosophers and educators a picture of a skillful performer emerged as one who is perceiving the important features of a situation, making the necessary adjustments to the changes that are occurring, and acting in accord with the rules or criteria of the activity or area. The performer is executing moves, some aspects of which have been made relatively automatic and some of which require critical thinking or the exercise of judgment, all of which are being performed successfully; and all

of which are being directed toward the successful accomplishment of the goals of the activity. Individuals engaged in the development of skill go through this process to attain some level of achievement.

What are the various levels of achievement that are assigned to a performance? Educational philosophers and educators have identified four levels of performance: “know how,” “competence,” “proficiency” and “mastery.” The levels of know how and competence are contextually determined. That is, the point at which we would say that the skill has been achieved at these two levels will vary from context to context. With regard to proficiency and mastery they are the labels assigned to higher levels of achievement independent of context. They are levels that require something that goes beyond formal training. They require the performer’s desire and motivation to continually strive toward excellence in the skill or activity.

What are skillful performances like at higher levels? What do we mean when we say someone has mastered an activity or area? Harry S. Broudy in an essay entitled “Mastery” analyzed and described skillful performances at the mastery level (1961). According to Broudy, skills have two major components: executive and judgmental. The executive component refers to the muscular movements executed in order to achieve some sort of goal or adaptation. The judgmental component refers to the choices and decisions made that may guide the sequence of muscular movements executed in order to achieve a goal or adaptation. Skills and activities vary and usually require different proportions of these components. For example, the carpenter, chess player, teacher, and physician need more of the judgmental factor than the typist, garbage collector, and apple picker. And the carpenter in his work surely has more muscular movements to execute than does the chess player. Mastery in, or of, an activity is judged by the efficiency with which one performs each component and the consistency with which the performer achieves the goal or desired end. For the executive component, efficiency is a decrease in the amount of time and energy needed to perform the task, and a reduction in the number of errors made. For the judgmental component, efficiency is the reduction in time or an increase in the speed with

which one chooses among alternatives, selecting the one alternative that best achieves the adaptation and goal. Those who have attained higher levels of achievement within an area are able to quickly recognize, almost instantaneously, the important cues in a situation, and then choose and execute with efficiency an appropriate series of actions to achieve the goal or adaptation. Or they may create new and innovative actions to achieve the goal. Their perceptual, discriminatory and judgmental abilities enable them to adapt to new or unusual situations almost immediately.

Individuals who have mastered an activity such as tennis, cooking, sailing, painting, sculpturing, and so on, or have mastered an area such as music, ballet, architecture, teaching, and dentistry are in control of the skills. They are able to act on fewer cues and adapt more quickly without taking the time to consider alternatives. The mark of a performer at the mastery level is that of one who is capable of adapting to new and unusual situations successfully, without deliberating or at least without prolonged deliberation. In observing the performance, the performer’s thinking is an extension of skill.

As a result of Broudy’s work it was generally accepted that there were two important components of skillful performances—an executive component and a judgmental component that is dependent on perceptual ability. The level achieved in an activity is dependent on the degree of efficiency with which one is able to perform each component. Thus, mastery is viewed as the level assigned to individuals who are able to make quick and appropriate choices and decisions in new or unusual situations to achieve a goal or adaptation.

The quickness of decisions and the efficiency with which the decisions are carried out is the result of the performer classifying the information and knowledge acquired into larger categories: knowledge associated with the executive component (i.e., how something is done) and knowledge associated with the perceptual-judgmental component (when something is done). Thomas Green put forth the notion that along with the acquisition and classification of such knowledge, what is critical is that the performer possesses an understanding. The individual must know why certain things are done and why certain actions will produce certain outcomes or effects. Mastery and control of an area are heavily dependent on a person knowing

why. The judgments and decisions are aided by an understanding. Thus, we may say that a person's knowledge of how, when, and why are the critical features of becoming skillful in an area. The knowledge of such things acquired in a verbal sense and then practiced in an active sense is essential in becoming skillful and mastering an area or an activity.

Persons who have mastered an area or an activity, and I use the terms interchangeably here, have acquired a disposition to act in accord with the rules of the area. Their performances are actualizations of the knowledge associated with a rule-governed activity. Their verbal understanding of the knowledge and principles associated with the area enables them to transform habit into action. To master some area or activity is essentially to be in control of the rules, techniques, tactics, and strategies that make up the formal elements of that activity or area. The knowledge about *how* such things are performed, *when* they are performed or in what situations they are most effective, *why* such things are performed or why they have certain effects, and the knowledge about the actions permitted or not, all constitute the rules of the activity, which in turn governs the individual's performance.

Knowing how in its fullest sense and at its highest level of achievement requires action and "being able" to do something. The rules—the knowledge surrounding the formal elements of an area—define the activity and define the actions of the individual's performance. Thus, knowing how and being able to perform the specific techniques, tactics, and strategies; knowing when to perform the techniques, tactics, etc., and being able to make the appropriate judgments, choices, and decisions in various situations; and knowing why certain techniques, tactics, and strategies are used in particular situations are all important knowledge types and actions that are learned and performed. This generic description of a skillful performance was set forth in detail in *Verbal and Non-Verbal Moves of Teaching* (Catelli 1981).

Concepts from Psychology and Motor Learning

How do individuals learn or acquire a motor skill? A. M. Gentile, an empirical researcher and educator, developed a model depicting the learner's pro-

cess for acquiring a motor skill. Skill is task specific and goal directed in her schema. The model proposed by Gentile in 1972, and then further developed in publications of 1987 and 2000, identifies phases and a series of critical events involved in learning a motor skill. The focus is on the motor operations and the perceptual-judgmental component of skillful performances. The model incorporates the constructs of implicit and explicit learning. That is, it has been proposed that there are two interdependent learning processes to mediate skill acquisition: explicit learning and implicit learning. Explicit learning involves a conscious awareness on the part of the performer. The performer is consciously matching her movements to the environmental demands in order to achieve a goal—for example, to get the ball in the basket while being guarded by an opponent. The performer is guiding her successive actions, analyzing the situation, making choices, using past experiences, and predicting outcomes, all to achieve a goal with a level of consistency. The implicit learning process is not consciously accessible or available to the performer. It involves internal changes in the organization of the motor operations or movement that then, with practice, lead to an efficient and smooth movement pattern(s). For example, if we were to compare a novice ice skater with a skilled skater the quality of their movements would look markedly different. The skilled skater's movements are smooth and effortless while the novice skaters are jerky and lack control.

Briefly, and in its simplest form, in the initial phase of learning a motor skill, the phase in which the explicit process of learning is more influential, the performer:

- identifies the goal to be achieved or the problem to be solved;
- identifies and attends to the relevant factors in the environment;
- formulates a movement or a plan to accomplish the goal;
- executes a movement or movements as closely to the plan as possible;
- gets feedback about what was done;
- decides what the next response will be; and
- performs a second response or action and, if successful, goes on to the next phase of learning a motor skill.

An important point is that in open skills or tasks (i.e., tasks in which the physical environment is constantly changing as in a game of basketball or walking across a busy street), the performer must predict ahead of time what will occur in order to have movements and actions coincide with the event or to avoid the event (e.g., catch a thrown ball or avoid being hit by a car). To do this, the individual must be able to pick up information on fewer cues, make judgments, and decide which movement or motor plan is appropriate to execute or if one needs to be created.

Another important point is that feedback about the movement or action is important in learning a skill and becoming skillful. The performer must receive feedback information about the motor aspects of the performance as well as the outcome that was produced. Equally important is the information that performers receive regarding the appropriateness or inappropriateness of their judgments, choices, and decisions.

CRITICAL COMPONENTS OF SKILLFUL PERFORMANCES

For theoretical and pedagogical purposes, skillful performances then have three interdependent and critical components: a motor component, a perceptual-judgmental component, and a conceptual component. All three operate in a dynamic way to achieve a goal or solve some problem the performer has confronted. As presented by Linda A. Catelli in *Verbal and Non-Verbal Moves in Teaching* (1981), these three components (examined below) and a generic psychophilosophical description of skillful performances can be and have been used by educators as pedagogical categories to organize knowledge and content for purposes of developing skillful performers. And they can be used by researchers as key components of a theoretical framework for investigating the development of skillful performers in an area.

Motor Component

The motor component refers to the motor operations an individual performs in such activities as playing a piano, playing a sport, dancing, painting, sculpturing, and drafting. The motor operations are the basic ingredients that make up the techniques of the activity. They involve the performer organizing and controlling movements and actions to meet the

demands of a stable or changing environment to achieve a goal. It involves explicit and implicit learning. For the motor component, efficiency is a decrease in the amount of time and energy needed for the performer to perform the technique, and it is a reduction in the number of errors made. Knowing how and being able to perform each technique is the important feature of this component.

Perceptual-Judgmental Component

The perceptual-judgmental component refers to the judgments, decisions, and choices that are made in order to adapt to a situation and produce some type of outcome or effect. This component includes judgments and decisions that are made about a situation that in turn determine which technique, tactic, or strategy will be used to accomplish the goal, or that stimulate a decision to create a new and innovative technique. In order to make the appropriate judgments and decisions the performer must first perceive the important features of the situation and then recognize that the situation requires the use or creation of a new movement, plan, technique, or tactic. The perceptual-judgmental component involves an ability to perceive the important environmental and situational factors, and an ability to analyze situations to make the appropriate judgments about which technique, tactic, or strategy will be used to achieve the goal (e.g., the quarterback deciding which play to run or the teacher deciding which teaching-learning strategy to use with a student). Both these abilities depend on prior knowledge of the use and effects of the different techniques or strategies in various situations, and prior knowledge of the important environmental and/or situational factors to attend to. Knowing when to perform each technique or strategy and being able to analyze and make the appropriate judgments in a variety of situations is the important feature of this component. At the mastery level, the performer is creating innovative techniques and strategies to meet new situations and to achieve the goal or solve a problem.

Conceptual Component

The conceptual component refers to the classification of the specific knowledge type and information

that make up a particular activity or area. In its fullest sense, it is the integration of the knowledge types that are then embedded in actions and skillful performances and seen as a person knowing how, when, and why, and being able to. For pedagogical purposes, knowledge in this instance is classified as providing the following information:

- facts and ideas about how techniques, tactics, and strategies are performed;
- facts and ideas about the use and application of techniques, tactics, and strategies in various contexts and situations;
- facts and ideas about why certain techniques, tactics, and strategies are used or applied in certain situations, as well as why they have certain effects; and
- facts and ideas of and about the rules and procedures that govern the activity or area.

THEORETICAL DESCRIPTION OF SKILLFUL PERFORMANCES

When the three critical components—motor, perceptual-judgmental, and conceptual—are combined in a dynamic sense they describe and define skillful performances. Skillful performances are actualizations of the different forms and types of knowledge acquired or learned. They are reflections of one's ability to act in accord with the rules of the activity or area, and they are reflections of one's ability to critically analyze situations and apply the knowledge acquired in innovative ways to meet the demands of new and unusual situations. At higher levels of achievement, skillful performances are "dispositions." They are illustrations of one's capacity to think what they are doing while doing it and to think in such a way that the goals of the activity are achieved under varied conditions and in numerous contexts and situations.

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